The New York Medical Times

VOL. XV. NEW YORK, AUGUST, 1887. No. 5.

ORIGINAL ARTICLES.

ON DRUG ACTION.*

BY J. H. CLARKE, M.D., EDIN., LONDON, ENG.

THE FIRST THING that we ought to impress upon our minds regarding the action of drugs is, that in its essence we know nothing whatever about it. We know that when we introduce into the human body a certain drug, certain results will follow; but just in what way these results are produced, and why they are produced and not others, we do not know. It is quite possible to take the results as we see them, and from them name the drug a "stimulant" or "depressant" of this, that and the other organ, but in so doing we are only registering phenomena, and doing nothing to explain the essential action of the drug. The names are mere encumbrances, and we are much better off without them. When we say that *opium* causes sleep, and retards all the secretions, except that of the skin, we say what is perfectly intelligible; and when we say that *opium* is a narcotic, a stimulant of the skin, and a depressant of all the other secreting organs, we are only saying the same thing in language that is anything but intelligible. We have introduced a number of words which appear to mean a great deal more than they do, and are very apt to delude both those who use them and those who hear. How *opium* causes sleep we do not know—for the very sufficient reason that we do not know what sleep is. To call *opium* a "narcotic" does not help us in the smallest degree, but the very reverse. M. Thomas Diafoirus, in Molière's play, gave, in fact, the only answer he could give to his examiners, when asked the question why *opium* caused sleep—"*Quare est in eo virtus dormitiva*'—Because there is in it a sleep-producing power. It looks very amusing, and as an "explanation" no doubt it is. If he had said "because it is a narcotic," nobody would have been amused. It would have passed as a highly scientific answer. In point of fact the latter is much more deserving of ridicule. It explains no more than the other the reason why *opium* causes sleep. But it is dressed up in scientific garb, and the "very elect" are deceived by it.

The scientific mind is by nature always seeking out the causes of things—the forces and actions which underlie phenomena. It is not enough for the scientific mind to admire the beauty of the heavens, it must *know* also what all the movements of the heavenly bodies mean; it cannot be content to know that "one star differeth from another in glory," it must also know the reason why. And as the result of this persistent questioning we have the science of astronomy as it is to-day built up by generations of philosophers. The science of astronomy has been built up through accurate observation of phenomena, and accurate reasoning on the data supplied by observation. There is just the same tendency among those who study the science of medicine, and that part of it which has to do with drug action. It is not enough to know that *opium* produces sleep, we want to know also why and how? It is inevitable and right that this should be so. How far it is possible to receive any answer to our questionings is another matter. We must proceed on the sure lines of science and enquire.

To go back to our illustration. The astronomer of to-day, by reason of the researches of his predecessors, can map out the courses of the stars, can tell just how the heavens will appear at any future time, can weigh the stars and measure their distances, he can even tell of what they are made. But when he has done this there comes a point beyond which he cannot go. He infers that there is a force holding them all in their places and impelling them onward in their several courses. He cannot tell what that force is. He can measure its effects and he can name it from those effects, but its essence he knows nothing of. He must be content to register phenomena and remain ignorant of what is behind them. If he were to take the name he has given to the force which he knows is there—gravitation—and then delude himself with the notion that in saying that gravitation was the cause of all the phenomena he had really added anything to our knowledge, he would be acting just as those do in our profession who think they explain the action of a drug when they say it causes "stimulation." The word "stimulation," like the word "gravitation,"

* Read before the British Homœopathic Society, June 2nd, 1887.—(*Hom. Rev.*, July, 1887).

represents certain phenomena, but explains nothing of what the forces really are that produce them.

In all scientific investigations it is necessary to have clearly before us the limits within which our research is confined, and in what directions progress is impossible. We must proceed to making sure our ground at each step; we must know the nature of the materials we have to work with; and we should have some clear notion of what we can get out of them. In an inquiry into the action of drugs, there are several important points to remember at the outset.

(1.) We have two factors: on the one hand there is the drug, and on the other there is the human organization.

Let us ask, in the first place, is there anything in a drug—a plant or mineral—which would lead us to suppose it capable of acting either poisonously or medicinally on a human being? Is there anything in its botanical or physical properties that would lead to the inference that it had any relation whatever to the physiology of man? There is absolutely nothing. It is a fact proved by experience—and a fact that could be proved in no other way—that there is a relation between plants and minerals and the human organism. Why it should be so we cannot tell, and it would be idle to inquire. We take the fact, and this fact gives us foot-hold for our first step in the investigation.

We have got then to this point: there is a relation between drugs and the human organization. The "why" of it we must leave; progress is barred in that direction. We now come to ask "how?"

How do drugs affect the human organism? Before we attempt to answer this, we must make clear what we mean by "how." "How" means two things—"in what manner as to effects?" and "in what manner as to action?"

To the former "how"—"what effects do drugs produce on the human organism?"—the answer is not doubtful. By the same experience which teaches us that drugs have a relation to the physiology of man, we learn what effects ensue when the two are brought into relation. And there is no other way. By experience we know that *opium* produces sleep, and *belladonna* delirium; and by experience only we knew the special powers of each drug on the human organism. In this relation each drug has a character of its own, and the sum of its observed effects constitutes the portrait of each drug. And in this way the first "how" is answered. *How* do drugs affect the human organism? They produce when administered certain effects; and the sum of the effects observed to follow the administration of each drug, constitutes the character of that drug as distinguished from all others.

But what should we say in regard to the second "how?" How do drugs produce their characteristic effects? Here we are compelled to pause. We are dealing with living beings and living tissues, and before we can answer this question philosophically we must, if we are to proceed according to the dictates of true science, answer the previous question, namely, "What is life?" We all know that this is a question that has not yet been answered. Answers have been given, it is true, and definitions have been framed, but no one has presumed to claim that his answer or his definition is satisfactory. In physiology, as in astronomy, we can go a certain way; we can register phenomena, and we can go behind one set of phenomena to another set, and another. But there comes at last, and in no very long time, a point beyond which we cannot go. As we can infer a force of gravity, but cannot tell what that force is in its essence, so we can infer life, but what life is essentially we cannot tell. We must rest content with its phenomena.

That there are explanations of a certain kind in physiology I do not deny. Blushing and pallor are due to dilatation and contraction of minute blood-vessels; and this again is due to contraction or relaxation of the muscular element in their coats, or to increase or decrease of the heart's action; and again this may be due to impressions made by different emotions on the mind. But at every step we come to a point where we can go no farther. * What is the nature of the impression which causes the blood-vessels to be relaxed? We cannot tell. We may call it "relaxant" or "depressant," but these words give no information; they only record the phenomena and do not explain them. And why should a feeling of shame produce one set of phenomena, and a feeling of fear a different set? Again we do not know; and we learn nothing by giving the different effects different names. What we do learn is this, that behind all the phenomena there is something invisible, intangible, imponderable, which we may for convenience call "force" or "life.' What that "force" or "life" is we can only know as it appeals to our sense and our understanding in so far as our senses and our understanding can apprehend its effects. There is a difference between an amœba, or a white cell of the blood, at the moment when it ceases to respond to all outside influences, and at the moment before. What that difference is neither chemist,

physicist nor biologist can tell us. All that can be said is that at one moment it was living, and at the next it was dead. Something has gone from it; that something is what we call life. What we know of life is only its phenomena.

From this it follows that in the investigation of drug action, which deals with the peculiar powers of drugs in relation to the living organism we must be content to limit our inquiry to the effects produced by drugs on the phenomena of life. We cannot really "explain" the essential action of drugs until we have explained essential life; for it is the action and reaction of the drug and the living organism that produce the phenomena. Here we find the characteristics of the different drugs depicted as in a mirror; and to attempt to learn their characters in any other way is about as sensible as it would be to cut a hole through a mirror or go round it, in order to get at the image.

In order to appreciate how little we know of what life is, let us look for a moment at the difference between the two sciences of anatomy and physiology. Anatomy is a perfectly well-defined science; and about as thoroughly well-understood as any science can be. It deals with the structures of the human body; their relative positions one to another; the size, shape and appearance of each, and their structure. Anatomy deals with still life; it is studied on the dead body and dead tissues; it takes no cognizance of the changes that are taking place in the living body. Very rightly a knowledge of anatomy is insisted on in the schools as a matter of paramount importance. Here it is possible to *know*. But introduce the element of life. At once there is a marvelous change. Those tissues and organs that before we could watch at our leisure and describe in all their characteristics, have now a new element added to them that eludes the sharpest eye to trace, and the cleverest pen to describe. All is now unrest and change. A few steps in the series of changes we can trace; but in every direction we are being stopped by some impassable barrier. And if we do get beyond a barrier that seemed impassable once, it is only to find another beyond that. We can trace the food along the channels by which it enters the blood-vessels; but we cannot tell for certain how it is converted into blood. We can trace a connection between distant parts of the nervous system and different organs and their functions, but we cannot tell how far the one is dependent on the other. We may think that by cutting the connection in a living animal we shall find out; but in order to do this we must violate the integrity of the organism and destroy the conditions which we wish to observe. The text-books of physiology with their endless conflicting theories can answer for this.

Passing from the reading of a work on anatomy to the reading of one on physiology, is passin into a different world. In the one science all is known, and the only differences among writers are differences as to the best description of what is. In the other science you cannot go a step but what some unanswered question meets you. And all these questions are one and the same question in innumerable forms—What is life? And all the interminable disputes among physiologists have arisen from the different answers each one gives to this question. For my part, I do not see how it is ever going to be answered. Certainly it will not be answered by the favorite methods of the present day—the mutilation of living animals. This only ends in the discovery of "centers" which have no objective existence, and in which few besides their "discoverers" believe—theories which only confuse vision instead of making it clearer. If physiologists would be content to state the facts that are definitely known in their proper sequence and relations, and put up signals to mark where our knowledge fails, physiology would not be the limbo of conflicting views and exploded theories that it is; but physiologists would not be content to do this. The unknown ground they label, according to some theory, with a word which means nothing though it seems to mean much; and then there is a battle royal over the label, and according as one sect prevails over another, the standard label of the victorious party is raised and that of the others torn down. To-day it is the Archæus of Van Helmont that explains everything; to-morrow the "Internal or concealed spirituous or nervous man which governs the whole machine" of Bœrhaeve; then it is Haller's label, the beautiful, simple and terse label of "Irritability;" again it is Cullen's "Excitement of the Nervous System;" and again Brown's "Excitability." There has been bloodshed over some of these labels, and yet I think you will see that they all amount to exactly the same thing, namely, that there is something underlying all the phenomena of animated nature that we have not fathomed, and which our faculties are not sufficient to enable us to fathom, but only to observe its manifestations. Nor is it necessary that we should be able to fathom all the mysteries of our being. We live in a world of appearances, and if we are able to penetrate to the forces beneath, it might render the work of life more difficult instead of easier. Though we know that the earth goes round the sun instead of the sun going

round the earth, we still speak of sun-rise and sun-set, and live as if the sun did actually rise and set, as our forefathers lived, who knew no better. And so it seems to me that we should be no better able to cope with disease if we could solve the problem of the mystery of life. At any rate we have something to work on in the phenomena of life, and as sensible people we are bound to take them and make the best of them, without crying for what we cannot reach, as children are said to cry for the moon. It may be that the best use of the phenomena at our disposal is the best use that is possible for us.

It was necessary for me to speak at length on the subject of physiology because the delusions of the physiologist have of late years been imported wholesale into the study of the action of drugs. A new science* has sprung up—the science of pharmacology; and pharmacology is the physiology of drug action. Or to put it more exactly it is the effect of drugs on the physiology of animals. It is the physiology of animated beings disordered by drugs, as pathology is the physiology of animated beings disordered by disease.

The modern physiologist derides the notion of the Archæus, or the spiritual man; and sometimes he denies the existence of any immaterial force underlying the phenomena of life. He uses the word "vitality" because it is convenient; but he explains it as meaning the sum of the forces appertaining to the various organs and tissues of the body. He regards the material part of the body as secreting, so to speak, the immaterial part. The word "evolution" is looked upon as a sufficient explanation of all that is mysterious; and the practical deduction drawn from these premises is, that there is no part of the animal organism that is beyond the power of the human intellect to investigate and understand. All is explainable, and explanations are to be sought for everything. The facts of life have come to be of much less importance than the explanations, each explainer being ready to fight to the death for his own particular one.

This passion for explanation finds ample scope for its indulgence in the new pseudo-science of pharmacology. Drugs produce certain effects; it is not enough, they say, that we should know this, we must find the explanation. If we suggest that the pure effects of the drug must be observed on the entire organism, they reply (as one of them did to myself), "The problem presented by the effects of a drug on the entire organism is too complicated for us to understand, and we can only arrive at a definite knowledge of the action of medicines by experimental analysis." But surely the only *definite* knowledge we can have of a drug's action is a knowledge of its effects—and that we can know perfectly well. Any knowledge obtained by "experimental analysis"—by which my correspondent meant vivisection—the cutting up of animals into small pieces and observing the effect on each separated piece—any knowlege of this kind is merely a knowledge of effects—effects of the drug *plus* the effects of mutilation. Pharmacologists think otherwise. They have a few words with which they delude themselves and the medical world, such as "centers," "depression," "stimulation." These words mean nothing more than that when you do certain things to certain parts, certain effects follow, and according as the effects are of a certain kind, "stimulation" is said to have taken place, and when of another kind, "depression," and the part of the nervous system supposed to be acted upon is called "center." It is merely the translation of observed effects into terms of "stimulation," "depression" or "centers."

What is a nerve center? Dr. Lauder Brunton (*Pharmacology and Therap.*, 139) says: "By nerve centers we simply mean the groups of cells and fibres which are concerned in the performance of certain acts." He goes on to say that the same group of cells may be the "center" for several different acts. The term, in short, is a term of convenience, and simply expresses the fact that there is a relation between the functions of certain parts of the nervous system and the functions of certain other parts of the body. The talk about centers "controlling" and doing this, that, and the other is pure inference, and is, in fact, anything rather than the "definite knowledge" which is the pharmacologist's supposed desideratum. It is plain then that the term "center" cannot help us to understand drug action, because it is merely another way of stating the observed effect of drugs, and not an explanation.

Now let us try "stimulation." In treating of cardiac stimulants, Dr. Brunton says: "Stimulation is observed by increased energy of contraction, the rate of pulsation remaining the same or becoming slower," p. 276. Then, what is "stimulation?" It is just the same as with "centers"—it is a name merely. It is the name given to the action which results in certain phenomena; but it does not explain what that action is in itself. And the same may be said of "depression." When a drug is administered to an animal, and certain effects ensue, the action is called according as they are characterized by increased or de-

* "Pseudo-science" I should have said. The new science of pharmacology is that expounded by Hahnemann, as I have stated below.

creased energy, "stimulation," or "depression." But supposing we could see the drugs at work apart from their ultimate effects; supposing we could see them in the nerve cells, or in the muscle tissues, we should not be able to tell what their action was, whether "stimulation" or "depression." From this it follows that the translation of the phenomena of drug action into terms of "stimulation," "depression," and the like are no real explanation at all, and provide no true knowledge. It is in reality a retrogression. We can have *definite* knowledge of drug effects, but when we translate them into terms of the unknown, as these terms really are, all definite knowledge is impossible.

As a proof of the truth of what I say, and a standing monument of the futility of all this striving after explanations, I cannot do better than refer to Dr. Brunton's—not great, but big—book on *Pharmacology, Therapeutics and Materia Medica*. In this are to be found all that the chief exponents of this pseudo-science—this science which leads to no definite knowledge—have been doing and are doing in their self-imposed labors of Sysiphus, and I would take this opportunity of asking you to look carefully at its results. If a useful therapeutic measure that can be legitimately traced to these so-called explainings can be discovered in them, that will be done which has not been accomplished hitherto. I say *legitimately*, because it is the fashion of these investigators—ignorantly or knowingly, I cannot say—to take well-known therapeutic facts, and having "explained" them, as they suppose, forthwith attribute the discovery of the facts to the explanation. Against jugglery of this kind I protest.

But is there no true science of pharmacology? No true science of drug action? Yes, there is. Science is knowledge; and we do undoubtedly know much about drugs and their action. But we must be content to know drug action just as we know the force of gravity—by its effects. We know the effects of the force of gravity; we know the laws of its action; and knowing these, we are able to make the force serve us just as well as if we knew what it is in its essence. We can read the laws by observing its effects, and we can anticipate its effects, and in a certain way "explain" them by reference to the laws; but in the end we must confess that the explanation is not really an explanation, the laws themselves being mere inferences from observed effects. And with drug action it is just the same. All we know really is the effect we can observe after a drug has been administered. We can, by comparing one set of effects with another, spell out certain laws of drug action. But these laws do not afford any real explanation of the drug effect, being themselves only deductions from effects observed.

In this way, and in no other way is it possible, to obtain "definite knowledge" of the action of drugs. Drugs manifest their real character by the alterations they produce in the appearance and sensations of those to whom they are administered. The study of these constitutes the true science of pharmacology; and to interpret these appearances into obscure language of "stimulation" or "depression" of tissues and nerve "centers" confuses the understanding, and takes us from the solid ground of fact into the abyss of speculation.

The founder of the true science of pharmacology is, I need not remind you, Samuel Hahnemann. He was the first who had the courage and the strength to sweep away the dust of ages from the materia medica, and give to the world a materia medica of the pure effects of drug action. Then first it was possible to know what the true character of drugs was. Before that we could only know the opinions of various people about them. Since Hahnemann has shown us how, any one of us can test the powers of a drug upon his own person, and have the evidence absolutely at first hand.

The futility of any other method of studying drug action than that of observing its "effects on the entire organism" is still more plainly seen when we apply this knowledge in the treatment of the sick. Hahnemann took his stand on the undoubted effect of *cinchona bark* in curing patients of ague. Asked the question "how?" Cullen's answer to this question was—by tonic action on the stomach. This did not satisfy the acute intelligence of Hahnemann. He took some of the *bark*, being himself in health at the time. He then from this *cinchona* produced in himself a condition indistinguishable from a paroxysm of ague. This was not an explanation; but it was another fact, and Hahnemann at once saw its importance. *Cinchona* could not only cure patients who had ague of their disease, but it could cause ague in those who had not got it. From this observation the idea flashed on Hahnemann's mind that the way to find out the curative powers of drugs was not by framing theories explanatory of their action, but by testing that action on healthy persons. The pictures of disease exhibited in persons under the influence of drugs gave the clue to the cases of disease they were capable of curing.

In this way Hahnemann built up his *Materia Medica Pura*. He recorded simply the positive effect of drugs, and gave no theories as to their

action. Drugs, he contended, and truly, can be known only by their effects. The actions of drugs on the human organism can only be known by testing them on the healthy and entire human organism. The framing of theories explanatory of these effects is worse than useless. When we come to apply our knowledge to the treatment of the sick we have something definite in their positive effects, and something always available. Of what use would it be to us even supposing we could know exactly what "center" a certain drug acted on, and whether it "stimulated" or "depressed" that center; and supposing we knew exactly what we meant by these terms? When we came to apply this "knowledge" in practice, we should be at once met with the theories of pathology. Before it would be available we should require to know in every illness what "center' was in need of stimulation or depression. But as every one knows, whilst the facts of pathology, the appearances and sensations presented in diseased persons, and the appearances to be observed after disease, are tolerably well known and definite, the theories explaining these appearances are innumerable. So it follows that until the pathological doctrines are agreed upon by all our knowledge of the "center-stimulating" action of drugs will be of no use to us whatever; whereas the effects of drugs observable on the healthy, and the phenomena of disease, are each perfect, definite, and always reliable. In clinical features, diseases known in the days of Hippocrates are recognizable to-day; and in their power to derange health the characters of drugs have not changed. Hence we are far better off for the practical purposes of our calling in being able to read the characters of drugs in their effects on the entire human organism, than if we could reduce those effects to the unknown terms of "stimulation" and "depression."

At the International Medical Congress held in London in 1881, Professor Huxley said, referring to the work of the pharmacologist of Dr. Brunton's type :—"There can surely be no ground for doubting that, sooner or later, the pharmacologist will supply the physician with the means of affecting, in any desired sense, the functions of any physiological element of the body. It will, in short, become possible to introduce into the economy a molecular mechanism which, like a very cunningly devised torpedo, shall find its way to some particular group of living elements and cause an explosion among them, leaving the rest untouched."

This is a very fair description of what Hahnemann achieved for medicine nearly a hundred years ago. Modern pseudo-pharmacologists have done nothing whatever towards the attainment of this result. They refuse to look at Hahnemann's work, by virtue of which every practitioner of homœopathy is, every day of his life, sending a "cunningly devised torpedo" to the very spot he wishes it to affect, whether in the way of "exploding" what needs removing, or doing whatever other work he wishes. But it was not by the methods of modern pharmacologists that Hahnemann made his discovery; nor will they reach the goal Professor Huxley set before them if they keep on in their own way. Hahnemann found out the specific affinity of each drug for specific parts of the human body by observing the phenomena following their administration to healthy human beings; and, acting on the law which he discovered of the specific relation between the effect of drugs on the healthy and on the diseased, he inferred what their curative powers would be from their effects on the healthy. And experience proved his inference true. He took fact for his starting point, and on fact he built up his system.

That there is a specific relation between the powers of drugs to derange health and to restore health when deranged in a similar way from other causes is admitted in the most popular books on therapeutics of the day. It is true that the fact is not then confirmed; on the contrary, certain "explanations" of the fact are vouchsafed, which clearly proves that likes curing likes is not homœopathy! It is "substitution" or something else that nobody knows anything about. Homœopathy knows nothing of theories. When *ipecacuanha* cures a patient suffering from sickness, this is an instance of a disease being removed by a medicine capable of producing a similar disease. The "how," as I have said, we must leave; and we lose nothing by leaving it. Homœopathy does no more than assert the relation. It leaves altogether the question of the manner of the drug's operation. Hahnemann had theories it is true, but they do not affect the meaning of the term homœopathy. To say that the example above mentioned of drug action is not homœopathy but "substitution" is to say that one and one do not make two but a theoretical unknown quantity. The two cannot be put in the place of one another. Homœopathy asserts a fact; "substitution" asserts an explanation of the fact.

And now I think we have cleared our decks and are ready for action. The study of the action of drugs is the study of what drugs *do* and can do, and we need not concern ourselves with what we or any one else may choose to think of the pre-

cise manner in which they do it. There will be time enough for study of this kind when we have found a satisfactory answer to the question, "What is life?" In the meantime speculation is idle, and if any of us are at all inclined that way, we may well postpone it until we have retired from practice with a fortune. It will be found to be an inexpensive amusement, and perfectly harmless.

And though we have thrown overboard all the useless lumber of speculations and explanations that themselves need more explaining than what they purport to explain, there is no lack of more profitable work left to us. It is no light undertaking to possess one's self of the character of the different drugs so as to be able to tell just what each will do under any given set of circumstances. Only there is this immense consolation, that whatever labor we spend on this work we can use with effect for the good of our patients. And the work, though difficult, is by no means dry and uninteresting. It puts a demand on the memory and the intellect; but so does every other study that is of worth, and so do many that are worthless. But the pleasure—the mere intellectual pleasure, I mean, quite apart from the much higher and more substantial pleasure that comes with increased power of doing good—the pleasure far exceeds the pains of study. There is something wonderful when we see, after the botanist, the gardener, the farmer, and the merchant have told us all they know of the beauties, the habits, and the uses of a plant, an entirely unsuspected power develop when questioned in Hahnemann's way. Who could tell the powers for good and ill that lurk in the beautiful Monkshood from a mere examination of its action and form? Or who could describe the powers of *arsenic* from an examination of its crystals under the microscope, or by testing its reactions in the chemical laboratory? There is not even an analogy between the characters of drugs in their different spheres. When we come to the power of drugs over the living organisms we enter a new world, and we must explore its wonders in a different way from that of the botanist and the chemist.

Through the labor of Hahnemann and his followers who have investigated this new world we have a chart to guide us. In their own persons they have tested the actions of drugs, and put down, without attempt at explanation, just what they experienced. Out of these materials, the changes, pains, sensations actually produced by drugs, pictures of their powers have been drawn, as it were, by nature's own hand, and the materials provided by their experience have been supplemented by the records of poisonings. These materials have been arranged in such a form as to show the relation of any drug to each part of the human organism. Each proving and each poisoning does not exhibit *all* the effects of any drug; and therefore, for the sake of reference, it was necessary to put all the symptoms relating to any one part in the same category. The method followed has been, with few variations, that of Hahnemann himself.

To learn by heart all the symptoms ever produced by every drug is an impossibility; but it is far from impossible to get from a study of the symptoms such an intimate knowledge of the character of a drug as to be able to recognize its parallel in the manifestations of disease, and to apply it with excellent effect in practice. And when a case comes before us which we cannot fit with the right remedy in this way, it is still possible for us to find the medicine we want by referring to the various indices or "repertories" to the materia medica. There we find a concordance which will tell us under the symptoms we meet with in our patients the names of the drugs which have been known to cause these symptoms; and reference to the materia medica will then enable us to compare the different drugs with each other and with the case we are treating, and to select the one whose symptoms resemble those of our case most exactly.

Such work as this is not light, but there is this consolation, that though the work looked at as a whole may be appalling, each bit of it we master can be used at once, and the best way to learn more is to use well what we possess. A passion for investigation may well be satisfied by the worlds lying around us all unexplored. Next to nothing is known of the law of dose; the law of periodicity; and the law of tolerance. We know a few facts about these various questions, but they still await future Hahnemanns who shall arrange the knowledge we have, and supply other facts we have not yet found, to reduce to law and order what we know, as Hahnemann's discovery reduced to order what was previously known of the administration of drugs and indefinitely added to that knowledge.

—Gérardin has shown that one may judge of the quality of any kind of water by its flora and fauna. As for the flora, if the water-cress (nasturtium officinale) is not, as it is held to be in popular estimation, the health of the body, it is the health of the streams. Wherever it grows the wate' is wholesome, while, on the contrary, the duck-weed, water-lentil (lemna minor), always indicates a water of bad quality. As for the fauna, it is everywhere known that the water of streams which are deprived of fish and mollusks is unfit for drinking purposes.

REASONS WHY THE CLIMATIC TREATMENT OFTEN FAILS TO BENEFIT CONSUMPTIVES.

BY JOHN C. KING, M. D., BANNING, CAL.

DURING the past four years a large number of phthisical cases have been under my care. All of them came to this part of California for the purpose of receiving benefit from the climate which is well known to be especially adapted to that class of cases. In the *Medical Counselor*, for April, 1887, is recorded a series of fifty of these cases. The results, as there given, are sufficient proof of the advantages afforded to such patients by this climate—fifty-eight per cent. improved, including eighteen per cent. of positive cures; and yet, I am convinced that a much larger percentage might have improved, if they had properly utilized the climatic advantages at their disposal. I have seen some very promising cases transformed into fatal ones by the patient's failure to appreciate the proper use of climate. The great majority of those who come here seeking health are sent by physicians; they are instructed to "go to California for the winter"—that is all. If Eastern physicians only realized that California covers a range of latitude equal to that bounded on the north by Boston, Mass., and on the south by Charleston, S. C.; that altitude, in Southern California, varies from 260 to 13,500; that humidity varies from abundance of rain and fog along the coast to the arid plains and dry atmosphere of the desert; that temperature varies from a summer range of 130 in the shade, at Indio for instance, to that produced by eternal snow on the mountain tops. If physicians only appreciated these and similar facts, they would cease to praise or to condemn "California" as a "good place" or a "bad" for consumptives. Instead, they would endeavor to familiarize themselves with the climatic conditions of particular California localities; with the latitude, altitude, humidity, temperature, distance from the sea, soil, water, drainage, etc., etc., of the locality they select for their patients. Banning, in San Bernardino County, is rapidly becoming a popular health resort for consumptives; and in order that physicians may only send such cases here as require this particular climate, I have prepared a complete description of Banning (from a climatic standpoint), which may be found in the *Hahnemannian Monthly* for January, 1887. When the physician has selected the proper climate for his patient, his duties, as instructor, have only begun. He probably posesses the confidence of the patient, who will likely follow his instruction; he should therefore guard the case against the more common errors which travelers for health are subject to.

First.—The patient often believes that, as he is in search of climate, he needs nothing else; he will therefore save himself the expense of a professional consultation, and do without either advice or medicine. I have made a point of being friendly with this class of cases, in order to observe what effect the climate alone might have. Out of over twenty such that have fallen under my observation, only two have improved. The reason is obvious. Climate is not a medicine, it is not a "treatment," it is an auxiliary to treatment. Any one who, for a series of years, has prescribed the preparations of calcium, phos., sil., etc., must admit their value in tubercular diseases, and they are more valuable in proportion as the climatic and other conditions surrounding the patient are favorable. Moreover, professional advice regarding diet, rest, exercise, clothing, etc., is frequently of more value, if possible, than nerve medicine.

Second.—Patients forget that good climate is all out of doors, is never to be found in the house. I cannot conceive anything more injurious to themselves than for a dozen or more consumptives to hover around some hotel office, all expectorating, in friendly fashion, into the same cuspidor, inhaling each others' bacilli, sympathizing with each others' appearance and detailing longer lists of symptoms than can be found in a "safe cure" advertisement. These same bright disciples of Hygea will build a roaring fire in the parlor and keep the windows and doors shut; will cough, and sweat, and sleep in an apartment from which decent climate is religiously excluded. In short, the climate which many of these people exist in is an auto-genetic compound of carbonic acid gas and bacilli, diluted with a mere trifle of California oxygen. Good climate is useful only when patients live in it—that is, live out of doors. They must live, too, among healthy people as much as possible; away from other consumptives; apart from all depressing influences; in the sunshine and in the breezes.

Third.—Patients place an abiding trust in the sophism that "idleness is rest." It is useless to expect the best results from climate, unless the patient's mind is sufficiently occupied to prevent introspection, and his body sufficiently exercised to keep up nutrition. Time and again I have advised patients to buy or rent a little land, if only an acre, to plant it in trees, or vines, or flowers, to cultivate it and care for it. Such investments are invariably profitable in a fruit colony, like Banning. However, should he lose the

whole "plant" it would be cheaper than traveling, and better for him in every physical sense. On the other hand, over-exertion must be carefully avoided. To rest at short intervals should be the rule. Still, climate is out of doors, where the trees and the vines are, and there should the patient be.

Fourth.—Patients naturally prefer to dress like other gentlemen and ladies, regardless of hygiene. Many who come here imagine that, because the climate is semi-tropical, they must leave woolens at home and dress in cotton goods exclusively. On the contrary, woolen should be worn here the year around. Old Californians, cow-boys and gold-miners, wear woolen over-shirts from January to January. In these hot climates evaporation from the body is so rapid that the surface is liable to become chilled, with all the serious consequences of that condition. Woolen is an unfailing protection against this accident. Linen collars, vests, suspenders, corsets, or whatever else constricts the throat or chest, should be relinquished. Men should wear loose woolen overshirts, with light gauze underneath, and have a light overcoat handy for use during mid-summer evenings. Women should have light woolen or silk undervests, or else wear a light weight, loose fitting woolen dress, with rolling collar. Numbers of the patients who require our climate have poor appetites. They will eat a spoonful of heavy pudding, a piece of pie (dear to the American heart in exact proportion to its weight), perhaps sample the abominable "made" dishes, so frequently concocted in hotel kitchens and in private households where culinary economy is practiced to the detriment of health. Appetite must be cultivated, perhaps stimulated. (Cultivation of the appetite, by the way, is often neglected by the profession, because stimulation is easier). Diet must be adapted to the individual, and the individual must be taught that plenty of assimilable food is a better anti-bacillus than Bergeon's hydrogen sulphide.

Fifth.—One of the symptoms of pulmonary tuberculosis seems to be an insane desire to travel. The patient proposes to offset the disadvantages of "bad lungs" by indulging his desire to "see the country." Generally he sees what little of "Rome" there is in Southern California, and then dies. At a recent medical meeting a prominent New York physician urged that consumptive patients should be kept moving from one place to another, on the principle that improvement soon ceased at any given locality. This idea is at variance with scientific climatology. When improvement begins and then ceases, the cessation may be owing to the fact that an improper selection of locality has been made (the patient's hopefulness, meanwhile, having exerted a beneficial effect), or to improper hygiene or diet, or, and more likely, to a lack of out-door employment, or to the fact that the disease has progressed too far to be permanently checked. Traveling is tiresome; it exhausts both nerve and muscle. While in transit the patient is changing beds, water, diet, etc.; he is passing from one climate to another, and therefore is not enjoying the best. Some one locality should be chosen on account of its pre-eminent advantages, and the patient should permanently abide there. It must be remembered that Southern California is not a locality. This one county of San Bernardino alone is two hundred miles long, by one hundred miles wide, and contains all sorts of climates, good, bad and indifferent.

Sixth.—If the patient really requires a change of climate, do not allow him to suppose that a "winter in California" (or anywhere else) will, or ought to be, sufficient. I am now, as heretofore, referring to cases of tuberculosis, not of neurasthenia, etc. Vital processes are slow, and the retrograde movement of a chronic disease is usually much slower than its advance. I believe that when the patient leaves his home he should leave it forever. If the move is necessary it should be permanent. At least, the patient should remain in this climate for from five to ten years. As a rule, this course involves the whole family in the move—a thing devoutly to be wished. The patient is indeed fortunate when he can transfer family associations and home comforts to the climate best suited to his disease. Again, if the move is more or less permanent, the patient is more willing to find employment and, as he ought to avoid cities and towns (the centers of business), seeking rather the purity of country farms and villages, he will naturally accept some one of the many forms of out-door employment. It is an important, though painful, fact that a man, whose health is once broken by tubercular disease, can never return to his former business without danger to himself. He must be willing to sacrifice a life training in some department for the sake of life itself. For instance, an attorney seeks this climate on account of a deposit of tubercle in his lungs, causing emaciation, fever, night sweats, cough, etc. In the course of a year or two, he is apparently well again. If he should return to his practice, to the hard study, close application, nervous tension inseparable from any successful business, he would soon be in danger once more. Fortunately this climate offers business as well as

health. What is more healthful, more interesting, more profitable, than fruit-growing in a California fruit colony like Banning? I am able to assure the profession that a large majority of those who come to Banning in the earlier stages of pulmonary tuberculosis, who will not commit avoidable errors and who will obey orders, can be saved.

CLIMATE AS A HEALTH BUILDER.

BY EGBERT GUERNSEY, M. D.

TO MEDICAL men one of the most interesting chapters in English history is the story of the progress of medicine during the fifty years of the reign of Victoria, whose jubilee has just been celebrated. It was during the first year of the reign of Victoria that the law for the complete registration of births and deaths went into effect. Previous to that period the registration had been too incomplete for satisfactory comparison of the actual death rate with more recent times. From 1838–1847 the death rate in England and Wales was 22.16 per thousand, and the mean annual death rate from 1876–1885 was 20.07 per thousand. If the mortality in the latter period had been as high as in the former the deaths would have been more numerous by more than half a million. In this country the centennial of American medicine and surgery which told the story of a hundred years' progress in our profession, the result was even more favorable than that seen in the past fifty years of English history. The census of all the civilized nations of the world show a diminished death rate, healthier homes, and a higher and stronger physical and mental development. Then pestilential diseases spread almost unchecked. At present the cholera, the yellow fever, and small-pox, by careful attention to quarantine and sanitary measures, are surrounded by an almost impassible barrier and confined to the narrow limits in which they originated. Typhoid and typhus fever are more amenable to treatment, and consumption, hitherto the scourge of our country, shows a steadily diminishing death rate.

It is true much of this improvement is due to a higher and riper civilization, but the work of the medical profession has been an important factor in this great change. No one thing has contributed so largely to an understanding of the real cause of various diseases as the germ theory, built up as it is upon an unanswerable array of facts. The presence of certain germs which the skillful microscopist detects in the secretions of the body is a clue to the character of the disease, and the artificial culture of these germs and the experiments of the conditions in which they best thrive or are destroyed go a long way in solving the problem of many of the zymotic and other diseases. The condition of the system, a condition brought about, perhaps, by hereditary taint, by imprudence in living, render different individuals susceptible to the action and growth of different organisms. A strong and vigorous life resists those organisms which in other peculiar conditions would find a rich and receptive soil. Everywhere on land the atmosphere contains more or less germ-life, the fruitful seed of disease. In the rarefied air of the mountains, by the sea coast, and in the vicinity of large pine forests, there are but very few bacteria, and these localities if properly selected are often greater curatives than any drugs ever discovered.

Sea air taken at a distance from the land or on the shore during a strong wind from the ocean is absolutely pure, containing not a trace of bacteria, and however strong the wind from the land the sea has destroyed almost every particle of germ-life in the atmosphere before it has passed a hundred or even fifty miles over its surface. Marine atmospheres purify the air they traverse, not only destroying the death germs and the chemical poisons they produce, but by their very purity give fresh vigor and strength to the debilitated and exhausted by disease or mental or physical labor. It has been supposed that the death dealing power to germ-life of the ocean air and of pine and blue gum forests was owing in part to the ozone evolved in the atmosphere as it swept over the sea or rustled the branches and leaves of the trees as it breathed through them, but how the tossing ocean or the pine trees separated from the oxygen of the air the germ destroying ozone even the most skillful chemist failed to determine.

Recently a prominent English chemist, Mr. Kinyzett, undertook a series of experiments to solve a problem which had baffled so many students before him. Submitting the oils of turpentine and eucalyptus to the influence of atmospheric air and oxygen, he found that the oxygen was absorbed by the turpentine and the eucalyptus to an enormous extent, the gas entering into combination with them forming new substances. The oil became oxidized into a compound unstable in the presence of water and splitting up into peroxide of hydrogen, camphoric acid, etc. The conclusion reached by Mr. Kinyzett was that the health giving properties of the terebinthine forests was due not to the separation of ozone from the oxygen by their influence but the constant evolution of peroxide of hydrogen, soluble camphor, camphoric acid, thymol and certain other cam-

phoraceous bodies caused by the volatization and oxidation of naturally secreted oils; and second, that this depended upon the atmospheric oxidation of the "terpene" a principal of turpentine common to all, and most powerful in the ordinary turpentine of commerce derived from the pine. Whether the learned chemist's conclusions are correct or not that the healthy atmospheres of the pine and eucalyptus forests are due to the presence of peroxide of hydrogen and camphoraceous substances produced by the atmospheric oxidation of the essential oils secreted from these trees, it is certain that in carrying out the process which he supposes to prevail in the great and perfect laboratory of nature he has given the world in his sanitas preparations the most pleasant and safe, if not the most efficient, antiseptics for general use yet discovered.

The beneficial effects of pine forests have been recognized for centuries, the curative properties being ascribed to the resinous odor with which the air was filled in their vicinity, and it has long been a recognized fact that patients convalesce much more rapidly in wooden hospitals or pavilions in which pine is usually employed than in the more elegant and massive stone structures with their plastered walls. In 1876 Dr. Fedeli presented to the Roman Academy of Medicine a paper upon the powerful ebrifuge properties of the blue gum tree which led to such careful investigation that the Italian government distributed gratuitously an immense number of slips of the eucalyptus tree to plant in malarious districts with the result in many instances, on the Campagna and in other localities of reclaiming and making healthy places which for a long time had been depopulated from the presence of malarious poison.

One of the most important questions for the physician to consider is how to locate and utilize the proper climacteric influences, not only as a preventive of disease but as a health restorer and health builder. The question of locality and climate should be as carefully studied in reference to each individual case as the adaptibility of any drug to meet diseased conditions. Failure of proper discrimination in this matter has been characteristic of the empyricism, and jumping at conclusions without a sufficient understanding of facts for which our profession has been somewhat noted in the past, and which has brought many so-called health resorts into disrepute. A few cases are benefited by a residence on the elevated plateau and in the woods and among the lakes of the Adirondacks, and forthwith there is a rush to the woods the physicians failing in his recommendation to discriminate as to the class of cases which would be benefited and the class which would not only not be benefited but would receive positive injury. The results have been that in some of the so-called great health resorts of the world such as the pine woods of the Adirondacks and the mountains of Colorado the fatality from consumption has been greater than in almost any part of the world, simply for the reason cases have been sent there which would have been better off at home or which should have been sent to some other place.

It is fortunate that these repeated experiments and failures have lead to a more careful investigation of the subject and an understanding of the peculiar adaptibility of different climates and localities, based upon scientific conclusions to meet special conditions.

There is no doubt that in the future climate will be one of the great factors not only in the prevention but in the treatment of disease and in restoring strength to the wearied and enervated. Hereditary taint may not unfrequently be eradicated by a judicious change of locality and habits of life, and disease and general prostration overcome, by change from districts rich in germ-life to a purer atmosphere until the strength has so far returned as to be able to resist them.

We need, and the day is not far distant, when we shall have sanitariums along the Atlantic and Pacific coast, and in different localities among the mountains and favored spots of our country to which the seeker after health can resort with an almost certainty of finding in some place in every season of the year a climate best adapted to his condition. No doubt suitable places could be found for the location of sanitariums on the Atlantic coast, for those cases which would be benefited by the ocean air, from Nova Scotia to Florida, so that those extremes of temperature might be avoided which are now experienced between Maine and Florida.

Lakewood has recently come into notice as a winter resort to the people of New York on account of its nearness to the city, its more even and warmer temperature, and the pine woods by which it is surrounded. Not being more than forty miles south of New York gentlemen can go in and out of the city every day and attend to business, but it is evident a santarium like this could only benefit a very small portion of those needing change of air during the fall, winter and spring months. This want is met to a certain extent by Old Point Comfort Hotel located at Fortress Monroe, at the junction of Hampton Roads with the Chesapeake Bay some twenty miles from

its entrance to the ocean. The hotel accommodates one thousand persons, and is filled to overflowing almost from the beginning to the end of the year. So popular has it become on account of the mildness of the climate and the even temperature that it has within the past few years become one of the largest sanitariums in the country, necessitating the erection of an additional hotel with increased facilities, which will probably be completed the coming fall.

There is nothing special in the surroundings to make the place attractive. There are no pine groves with their life giving, healing influences, no rides of special interest, but simply the quiet waters of the bay, a delicious climate, and a hotel constructed to meet the wants of invalids and give them that comfort and rest they need. Twelve miles across the bay is the city of Norfolk, and eighteen miles from that by rail Virginia Beach, which is six miles south of Cape Charles, the entrance of Chesapeake to the ocean. This place has already been selected as a summer resort, and a large and commodious hotel erected, which during the entire summer is filled with guests mostly from the inland country towns and cities. A careful study of this locality has led us to believe that here may be found the peculiar conditions of climate and soil which has long been sought as a half-way house, a connecting link between the varied temperatures and inclement weather of the North, especially during the early spring and late fall months and the heat of the South. Here a beach of unsurpassed hardness extends for miles, while vast pine forests extend from far back into the country to within less than a hundred yards of the ocean, the air being filled with the fragrant odor of pines, many of them of more than a century's growth. The Gulf Stream, that river in the ocean carrying in its mighty and ever flowing current the warmth of southern seas tempering the air of colder regions is only about thirty miles from the coast at this point, tempering the air to such an extent that the surrounding country is but little behind, in its early vegetables, Charleston, Savannah or the Bermudas. Vegetables are planted in the fall, grow during the winter in the open ground and begin to be marketed in February. Northern sportsmen have long sought the waters of Currituck Sound and the back bay in this immediate vicinity, during the winter for the water fowls, ducks, geese and swan which are attracted here by the climate in considerable myriads from the far regions of the northwest. This is the most northerly place where they can obtain food in winter.

The mean temperature as shown from the U. S. Signal Station, Cape Henry, six miles north, thus far in 1887, was in January 40½, Feb 48½, March 44½, April 54, May 65½, June 71, and July 75. The temperature last year for August was 74, September 72, October 62½, November 53 and December 39, the extreme of temperature from the beginning to the end of the year being only thirty-four degrees, but little if any more than what is experienced at the North and in Florida in twenty-four hours. The air for the sea coast is particularly dry, and malaria is of course something unheard of in an atmosphere where owing to the air of the ocean and the chemical combination of the "terapine" from the resinous trees with the oxygen of the atmosphere the microbes and bacteria of disease cannot exist.

Among the varities of phthisis likely to be benefitted by a residence in a place like this may be included that called sometimes mucus or bronchial consumption attended with great lack of appetite, wasting night sweats and profuse expectoration. There is in these cases a failure of assimilation and a general waste in the system from lack of vital force and impoverishment of the blood. Another form of phthisis where a sojourn by the sea coast is productive of marked benefit is in that variety produced by syphilitic poisoning, it may have been years before, long after all trace of the disease was supposed to have been entirely removed. The points of diagnosis are, abundant expectoration without signs of softening; a debilitated condition without marked emacination; dyspnœa without evidence of cardiac and pulmonic obstruction to the circulation and pain along the sternum and the tibial crests. This class of cases are very much benefited by the ocean. Great weakness of the lungs and of the general system where there are no cavitis ulceration or hardening of the lung tissues is particularly benefited by the rarified air of the mountains where the purity of the air and the increased rapidity of respiration not only strengthen the digestive organs but the lung tissues themselves. But after the structure of the lungs have changed by hepatization, ulceration or the formation of cavites, diminishing their actual capacity for æration the mountains are no place for them as the lungs break down there much more rapidly than in lower locations. This is one reason why the Adirondacks and the Rocky Mountains, the last hope of so many, have received their victims only to hurry the end. The patients in many, very many cases have been sent to their death by those who ought to have known better. Patients with cavites in their lungs, with wasting

fever and highly excitable nervous organizations are generally far better off in their homes than in any health resort, but the crowd suffering from bronchial irritation, nervous prostration, malarial poisoning and an unnumbered list of ailments can often find in such selected locations peculiarly adapted to their conditions more benefit than from any variety of drugs however carefully selected. There is no subject now before the medical public more important than the selection and location of sanitariums which can be utilized for every season of the year. For the majority of cases three points are absolutely essential, an even temperature, good food and water, and an atmosphere whose conditions are such that in it the bacteria and microbes which form so large a part of germ life and produce so much disease cannot flourish.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills.

Agaricine.—Dr. Piering, of Paris, says agaricine is a reliable remedy in nearly every case where diminution of perspiration is desirable, notably in all varieties of phthisis. There is less thirst, and consequently less water ingested and excreted. Its action in arresting the sweating is prompt and decisive, without any ulterior effects.

Agaracine is a white crystalline powder, and is obtained from the edible mushroom—the *boletus laricis* growing on larch trees. The dose ranges from one-twelfth to one-sixth of a grain.

Paraldehyde.—Is an excellent remedy against insomnia, producing a refreshing but not too profound sleep, without evil after effects. Fifteen to twenty minims are sufficient, best taken in a little whiskey. It acts freely on the kidneys. It is an ethereal pungent liquid, coming from acetic acid and alcohol. It causes neither headache, sickness, nor constipation. Its odor is characteristic.

Mercuric Diethyl.—This volatile mercurial preparation, extremely and characteristically poisonous, is a heavy colorless liquid, insoluble in water, slightly soluble in alcohol and easily so in ether. Inhaling a small amount of its vapor produces a slow poisoning that with confusion of the faculty of speech, loss of space-sense and rapidly increasing degeneration of the mental powers leads to complete dementia. This preparation should, therefore, be especially considered in acute and chronic affections of the brain, dementia paralytica and brain syphilis.

Galium Aparine.—The galium aparine, commonly called goose-grass or cleavers, has long been known as a popular remedy for scrofula, cancer, and to stay bleeding. Dr. Winn tried it in nineteen cases of skin disease: five were cases of lepra; six of psoriasis; four of eczema; two of lichen; one of inflamed acne; and one of ordinary colored syphilitic eruption. In nine of these cases the benefit derived from the medicine was very striking. Dr. Bully, of Buck's Hospital, forwarded to Dr. Winn an account of three cases of cancer on which the g. aparine appeared to exercise an influence in checking the disease. The preparation used by Dr. Winn was an inspissated juice in four-ounce doses, three times a day. The plant has recently been successfully used for psoriasis.

Analgesic Action of Carbolic Acid.—Dr. Roger M'Neill (*Edinb. Med. Jour.*, June, 1886) has been experimenting with carbolic acid and the cresote group of compounds with a view to testing their local analgesic action when mixed with oil, glycerine, etc.; the latter agents being added with a view to prevent the painful or corrosive action which they would othewise have on the skin. In his experiments he found that, although no pain was felt on cutting the skin, the sensation to touch was intact, or but slightly affected. His conclusions are—(1.) That the agents mentioned produce analgesia when applied to the skin; (2.) that mixed in certain proportions with glycerine and olive oil, they take away sensation to pain without untoward effect; (3.) that the strength used must vary according to the thickness of the epithelium, and perhaps the acuteness of the sensation; (4.) that certain operations may be performed painlessly; (5.) that they are corrosive applied to the skin, unless diluted; (6.) that glycerine has more power in preventing corrosion by these agents than olive oil, and might probably be administered with benefit in cases of poisoning by carbolic acid.

Valerian in Diabetes Insipidus.—Demange says, in *L'Union Medicale*, that diabetes insipidus is best treated by valerian in doses of two to four drams of the powder per diem. This drug has been highly praised by Trousseau, and since his day has been revived by Bouchard.

Silica.—A case of cure of multiple cheloid was reported by Dr. John H. Clarke, in the *Homœopathic World* for August, 1885. The cheloid appeared after the excision of a tumor, in the scar. It was excised at St. Bartholomew's Hospital, but rapidly returned and increased in size, till the patient, a girl, was put on silica 3d, grs. iii, night and morning. The gradual disappearance of the growth under this treatment was one of the prettiest things Dr. Clarke has seen in medicine.

CLINIQUE.

THE INCREASED EFFICACY OF MASSAGE IN COMBINATION WITH THE ELECTRO-VAPOR BATH.

BY F. E. STEWART, M. D., PH. G.,

*Instructor of Materia Medica and Therapeutics Medico-Chirurgical College, Philadelphia; Lecturer and Demonstrator Women's Medical College of Pennsylvania, Etc.**

THE EMPLOYMENT of massage and the vapor bath, alone or in combination, is of ancient date. The addition of electricity to the combination is of more recent origin. Massage was practised by the Chinese more than three thousand years before the Christian era. It was a favorite procedure with the Greeks and Romans, being used after and in conjunction with the celebrated Roman baths, of which the modern so-called Turkish and Russian baths are but a feeble imitation. It was also used after the circus to restore suppleness to the joints, and dissipate wounds and contusions. Under the various names, *lomi-lomi*, *toogi-toogi*, *mili*, or *fota*, depending upon the locality where it is employed and the method of its application, it has been used by savage tribes in various parts of the world from time immemorial. And as for the vapor bath, there is probably no nation or tribe in the world which do not or have not employed it some time in their history in one form or another, so that it is difficult to say whether the more modern Russian and Turkish baths are in reality descended from the ancient baths of Greece and Rome, or have a more ancient origin in a common stock.

Massage is the popular therapeutic measure of the day, and rightly so. This is owing in part to its inherent merits, and in part to its successful use in the practice, hospital and private, of such men as Murrell, of London, Billroth, Esmarch, Mosengiel, Thiersch, Gussenbaum, and Schmidt, in Germany and Austria; and in this country by Drs. Weir Mitchell and Benjamin Lee. Now, I have been investigating the subject of the increased efficiency of massage in combination with the electro-vapor bath for some time, and I am satisfied that the combination is a valuable one. In the following article it is my purpose to give a description of the apparatus I employ for this treatment, my methods of procedure, and some of the diseases for which they may be used. I have given my opinion as the result of observations in my own practice, and in the practice of others who use the combination referred to. In future articles I will report cases treated, that the profession may judge more intelligently of the value of the treatment.

The electro-vapor bath that I employ consists of a metallic box, sufficiently large to comfortably admit the body of the patient, who sits therein with his feet in a hot foot-bath, which rests upon one electrode of a battery, while the stool upon which he is sitting has its copper seat connected with another electrode. Still another electrode, provided with a sponge, is placed in the patient's hand, and the lid is now closed, leaving his head projecting through an aperture provided for the purpose. A spray of hot water is now made to play in front of him, generating a cloud of vapor of any required degree of heat, which completely envelopes his body. The battery is now started, and future proceedings are as follows:

The patient is now told to apply the sponge electrode over the abdomen, and a form of abdominal electro-massage is resorted to that is very effectual in stimulating the peristaltic motion of the intestines. This consists in thorough and deep kneading of the abdomen in the direction of the ascending, transverse, and descending colon, with the electrode, applying the greater pressure over the regions of the cæcum and the sigmoid flexure of the rectum, for it is here that fecal accumulations are likely to occur. The result of this manipulation is often so immediate that I have known patients to be so affected by it that they could hardly wait until the bath was over before yielding to its influence; and cases of constipation of several days' standing have been effectually relieved by one such application. The electrode is also passed over the region of the stomach and liver, for the purpose of stimulating the functional activity of these organs. It is then applied to the patient's back by the operator, through an opening in the chamber provided for the purpose, and the spinal column, the kidneys, genito-urinary center, etc., are treated. The electrode is finally applied for some time to the neck over the medulla, for the purpose of securing the good resulting from general faradization. The face and neck are now gone over with the hand of the operator used as an electrode, and various regions stimulated by the current.

During all this time the vapor has been gradually growing hotter, and the patient is now in a profuse prespiration. The stimulating effect of the hot vapor is very apparent. The pulse is increased in frequency, the lips are full and rosy, the cheeks flushed, and the eyes bright; and the patient exclaims, "How delightful this is!" or, "What a luxury these baths are!" If only a

* From *The Medical Register.*

moderate amount of heat is employed a sedative effect is produced, and the patient experiences a feeling of delicious repose and a desire to sleep.

Now it is patent to any one versed in the physical and physiological facts concerning the use of electricity and the vapor bath, that the combination of two such powerful stimulants must exert a greater influence than the use of either alone. And if any one who desires to be convinced that a wet body is a better conductor of electricity than a dry one will apply a wet sponge electrode to his own body, reeking with perspiration in the hot vapors of a vapor bath, and at some other time try the same electrode, wet as before to his body under ordinary circumstances, he will not need further argument to be convinced of the fact.

The spray is now cooled down to a temperature a little lower than that of the blood and applied over the body both front and back. Being connected with a hose, the spray is conveniently employed by the patient himself to the anterior aspects of the body, after which the operator, using a mechanism by which another spray is raised and lowered by a cord, thoroughly sprays the back in like manner.

The patient next dries himself partially with a towel and steps out of the bath, when he is immediately enveloped in a dry sheet, placed upon a couch, and covered lightly with a blanket or silk quilt. We will let him rest there fifteen or twenty minutes before applying massage, while we consider the various manipulations grouped under the term and the method of applying them.

Massage may be divided into general and local massage. The former is used for its general therapeutic effect, and the latter in the treatment of local affections. Of course the operator must now be guided in its application according to the circumstances of the case.

In applying general massage I employ the system recommended and so successfully carried out by Dr. S. Weir Mitchell. The first manipulation consists in what is known as *surface pinching.* Commencing at the feet, the operator firmly pinches up the skin, rolling it lightly between his fingers and going carefully over the whole foot. The second manipulation is *passive motion :* The toes are bent and moved about in every direction —backward and forward—each rotated on its axis. The third manipulation is *kneading*, alternated with *stroking;* with the thumbs and fingers the little muscles of the foot are kneaded and pinched more largely, and the intro-osseous groups worked at with the finger-tips between the bones; then the whole tissues of the foot are seized with both hands and somewhat firmly rolled about. This kneading and pinching is alternated with stroking. This is done with the palm of the hand or its radial border, the thumb being abducted, and the force employed varying from a gentle pressure to the heavy pressure made by reinforcing the operating hand by the other laid on top of it. The situation determines the amount of force to be used. I employ more force above the ankle than on the foot. All the motions are centripetal, forcing the blood along the veins towards the heart, and having a like effect on the lymph in the lymph-vessels.

Next the ankles are treated to superficial pinching, kneading and stroking, in the same manner, all the crevices between the articulating bones being sought out and kneaded; after which, passive motion is resorted to, and the ankle-joint is put in every possible position. Next the leg is treated in like manner, first by superficial then by deeper pinching, stimulating the skin and areolar tissue. The larger muscles of the leg are then thoroughly kneaded, the muscles near the crest of the tibia being rolled under the fingers. Alternating with the pinching and kneading, I employ centripetal stroking—first gently, then with both hands, one reinforcing the other, guiding the amount of force used according to the sensations of the patient.

After manipulating the leg, the thigh is next subjected to the several processes described. In kneading the muscles of the thigh, one hand seizes the muscles lying on the inner side of the limb, grasping momentarily, and while the hand is relaxing, the other hand grasps the muscles on the outer aspect of the limb in a similar manner; and this alternate action of the hands is continued until the surface is well-covered.

After manipulating the thigh, the abdomen is next treated. I have adopted the excellent system of Benjamin Lee for doing this. The patient, lying on his back, with the trunk elevated and the feet drawn up, is directed to breathe quietly and regularly, and warned against antagonizing the treatment by voluntarily or involuntarily stiffening the abdominal muscles, and thus diminishing, or it may be even entirely preventing, its physiological action. Lee's method is composed of four distinct manipulations. If he has in view principally the stimulation of peristaltic movement of the intestines by reflex action, he makes use of the first and second; but if he wishes to act mechanically upon the intestinal contents, he superadds to the second, the third or fourth, or

even employs all three of them at once. The manipulations are as follows:

First Manipulation.—This consists in tracing circles around the umbilicus with the tips of the three long fingers of the right hand, the end of the thumb lying sideways upon the surface of the abdomen, and serving as a "*hypomochlion*" for the motion which is taking place through the joints of the fingers and the hand. To make the application more powerful, the circles are enlarged, and the pressure is made alternately heavier and lighter. The thumb, meanwhile, remains inactive. This manipulation is extremely irritating, nervous persons—women especially—being often unable to endure it. In that case the following manœuvre must be resorted to:

Second Manipulation.—The finger tips now remain inactive, and the circles around the navel are described with the palm of the hand. To accomplish this, the hand is extended as strongly as possible, so that it stands nearly at a right angle with the long axis of the forearm. The force is exerted principally by the heels of the thumb and of the little finger. The fingers, slightly flexed, follow the movements of the hand without exercising the least pressure. This manœuvre is always well borne, and combines a certain amount of mechanical action with the reflex stimulation. However forcibly it is employed, it very rarely causes pain.

The two following manipulations aim especially at producing a mechanical effect upon the intestinal contents. They are, therefore, to be applied over those regions in which the forces are to remain longest, and where the intestinal walls are, therefore, most likely to become distended, and their muscles be weakened—namely, the cœcum and the sigmoid flexure.

Third Manipulation.—In this the right hand is to be laid flat upon the right inguinal region, the tips of the fingers pointed downwards. The left hand must then make pressure upon the first phalanges of the right, and stroking be performed with both hands in this position, from below and within, upwards, and outwards, following the course of the caecum. In returning to the point of departure, the hands pass down over the navel, making scarcely any pressure. The use of the left hand is not merely to reinforce the right, but to prevent flexion of the fingers, and thus keep the entire hand closely applied to the surface throughout the entire stroke.

Fourth Manipulation.—This is similar to the preceding, except that it is applied over the opposite side of the abdomen, and the tips of the fingers are directed upward toward the sphere. The movement is, correspondingly, from above and without, downwards and inwards, and the more we approach the lesser pelvis the more deeply do we endeavor to bury the phalanges in in it. The patient, in receiving this manipulation, should be reclining with the body at an angle of 45°, and the knees semi-flexed, while the operator kneels or sits close to the right side reaching across the abdomen. If the patient is in bed, the manipulator usually stands, being then able to exert the greatest amount of force, and at the same time to call to his aid the weight of the upper part of the body.

After manipulating the abdomen, the patient is then turned over on his face, and the operator treats the muscles of the buttocks and back, giving special attention to the loins and spine. In manipulating the back, I use the method recommended by Reibmayr. The muscles are rolled outward on each side of the spinal column with the ends of the fingers. The supra-spinous ligaments are treated by transverse to-and-fro movements. The ends of the fingers and part of their palmar surfaces are also placed on each side of the spinous processes, and the tissues situated between them and the transverse processes worked by up-and-down motions parallel to the spine, taking care to avoid the too frequent error of making pushing, jerking movements, in place of smooth, uniform motion in each direction.

When applying general massage, I rarely manipulate the face and neck. In some cases, however, the arms are subjected to treatment. This depends upon the nature of the case and the duration of the *séance*. In manipulating the larger muscles of the body I employ, in addition to the motion described, the manœuvres known by the terms *vibration* and *percussion*. Vibration constitutes one variety of kneading, and consists of a rapid agitation of the tissue with the hand. The movement should be made with great rapidity, "and the reflex, thermal and electrical effects are remarkable."

Percussion, or clapping, consists in striking or beating the part to be treated with the palms of the hands, with their ulnar borders, or with the tips of the fingers held closely together; or it may be done with the closed fists, or with the dorsal surfaces of the first two joints of the fingers. The movements should be light, and from the wrists. After manipulating each joint, I use active and passive motion of the same in every possible direction.

The limits of this article will not permit a description of the methods employed for performing local massage over affected regions. Suffice it

at this time to say that it should always be commenced in the form of introductory massage, applied between the affected region and the heart, and that only after several days of this procedure should the affected region be encroached upon. Massage of the neck, too, should be described. Use Hoffinger's method in most cases, but for children and for persons with long, slim necks, Weiss's method is a good one.

Massage of the Neck (Hoffinger).—The patient sits on a chair with a high seat, the head bent somewhat backwards, and the neck, throat, and upper part of the chest uncovered. The masseur stands behind the patient, places the fingers of both hands in the groove beneath the lower jaw, and strokes rapidly downwards and outwards with moderate and equable pressure, the thumbs being directed posteriorly, and not touching the surface, and the arms moving easily and lightly from the shoulders and the elbows.

Weiss' Method.—In the case of a child, it is placed in the nurse's lap, and the head held somewhat tilted backwards. The physician sits in front of the child, and having previously oiled his thumbs, joins the fingers of both hands and the cervical vertebræ. The thumbs thus reach forward to the larynx, and the neck is completely embraced. Downward stroking is now made with the thumb, at first slow and gentle, and gradually increasing in rapidity and severity. The thumbs pass from the border of the lower jaw downwards as far as the clavicles, now stroking the region of the common jugular vein, and now the lateral region of the larynx. When the clavicles have been reached, the thumbs are again transferred to the lower border of the jaw without touching the neck.

Now for the *therapy* of general massage and the electro-vapor bath. We left the patient reclining on a couch, wrapped in a dry sheet and covered with a blanket or silk quilt. He may recline here from ten to twenty minutes. The time depends on circumstances. If the bath has been a protracted one, lasting twenty minutes to half an hour, the time should be shorter before the next procedure, providing the sweating continues after the bath. The point here is: Don't allow your patient to sweat too long. It were better to cool the sprays sufficiently to contract the capillaries, and thus prevent much cutaneous transpiration after the bath. It is often just as well to limit this interim between the bath and the next procedure to five minutes.

After this preliminary rest, the patient is instructed to wipe perfectly dry before massage is performed. A dry sheet should now be substituted for the wet one, and the *séance* begins. The time for this *séance* should be from fifteen minutes to half an hour. I calculate in most cases to use an hour, or an hour and a half at the most, for the whole treatment, including the bath and massage, and that required for undressing.

The patient, reclining on a couch or manipulating table, and the operator standing or sitting at his right side, is now ready for general massage, The manipulations should now be made as described, taking into account the condition of the patient, and going over the whole body, or parts of the body, as the case may require. It is well in most cases to pay especial attention to the abdomen, resorting to abdominal massage, and active and passive motions of the limbs calculated to strengthen the abdominal muscles; for nearly all the patients who will come to you are suffering with torpor of the digestive organs, and are greatly improved by abdominal massage.

If the case is one of neuralgia of the head, or one of the various forms of headache, do not forget massage of the neck.

The classes of cases in which good results may be expected from the massage and electro-vapor bath treatment are the following:

Neurasthenia.—Every physician is familiar with this class of cases. Dr. Douglass Graham, of Boston, describes them as those "who, in spite of rest, change and medication, have become chronic neurasthenics, the result of business reverses, overwork, worry, loss of relatives, disappointed hopes, or as a sequel of an affection that has existed in some part of the system, but which has recovered or has become of secondary importance. Dr. Weir Mitchell describes a division of this class as "nervous women who, as a rule, are thin, and lack blood. He says also of this class of women: "Most of them have been such as had passed through many hands, and been treated in turn for gastric, spinal or uterine trouble, but who remained at the end as at the beginning, invalids, unable to attend to the duties of life, and sources alike of discomfort to themselves and anxiety to others." Both Drs. Mitchell and Graham use massage very successfully in these cases. Dr. Mitchell often adds to his treatment "a combination of entire rest and of excessive feeding, made possible by passive exercise obtained through the steady use of massage and electricity." This class of cases yields most excellent results when treated by the combination of massage with the electro-vapor bath. General massage should be employed, and when there is much neuralgia of the scalp, massage of the neck will be found serviceable. It is no exaggeration

to say that brilliant cures may be expected with this treatment. A course of baths and manipulation, lasting from six to ten weeks, should be recommended.

Spinal Irritation.—There is a class of cases described many years ago by Teale, of Leeds, now commonly known as spinal weakness. Patients suffering from this condition complain of an infinite variety of perverted nervous sensations, which have their origin in the spinal cord. Among the symptoms are neuralgia, sometimes numbness, darting, prickling, tingling sensations, loss of muscular power, weakness, and inability of exertion, tremors, pain in the head, chest, or abdomen, nervous pains, and neuralgia of different kinds, shifting from place to place, inability to perform mental work; nausea, vomiting, spasmodic cough, palpitation of the heart, pulsations at the pit of the stomach, throbbing temples, heats and flushing, and a tendency to faint, etc. In these cases tenderness over the spine corresponding to the origin of the affected nerves is always a prominent symptom. Massage, with the electro-vapor baths, works wonders in their cure. Apply the electrode lightly over tender spots, and after a little while greater pressure can be given with impunity, and finally the tender spots disappear altogether.

Paralysis.—In infantile paralysis, in facial paralysis, in pseudo hypertrophic paralysis, in writer's cramp, in wasting palsy and allied conditions, the combination of massage and the electro-vapor bath will be found of great benefit. And there is reason to believe that locomotor ataxy is curable if this treatment is persisted in. Dr. Murrell says: "There is reason to think that massage is of much value in the treatment of locomotor ataxy." As the efficacy of massage is much increased by the electro-vapor bath, there is even more reason to expect good results from treatment. Iodide of mercury, one gramme, made into 120 pills, two or three times a day, is recommended in conjunction with the baths in treating these cases.

Constipation.—In speaking of massage in the treatment of this troublesome complaint, Dr. Murrell says: "It is certainly one of the most powerful therapeutic agents at our command." The electro-vapor bath alone will cure constipation. After the bath, abdominal massage should be employed (Lee's method), and in obstinate cases, percussion and vibration in addition thereto.

Dyspepsia—Averbech says: "Disorders of the digestive apparatus, and especially constipation, constitute one of the most marked indications for the employment of massage. When there are no complications, but the symptoms are due to disordered secretion, one can always effect a cure in one or two months, or at the outside three or four." Abdominal massage, especially with the electro-vapor bath, is a powerful stimulant to both the stomach and liver, increasing their secretion, and thus aiding the digestion of food. And the digested food builds good blood and tissues in turn, resulting in an increase of vital energy and restoration to health.

Corpulence.—Though very obstinate when drugs are used to combat it, corpulence yields to massage. Dr. Murrell, the celebrated English authority that I have already several times quoted, relates a case of a lady patient of his, aged thirty-eight, who, as the result of much good living and little exercise, had become inordinately stout. "She was very short of breath, and was disinclined for exertion of any kind. She had been fond of literary pursuits, but even these had lost their charm, and were irksome to her. She was extremely irritable, and a source of anxiety to her friends and relatives. Massage was prescribed, and in two months she lost more than twenty pounds in weight, and improved notably in other respects." Massage of the limbs should be employed, together with abdominal massage, to be used after the electro-vapor bath. The sponge electrode should be applied thoroughly over the colon by the patient when in the bath, using firm pressure, and kneading deeply when passing over the cœcum and sigmoid flexure.

Rheumatism.—Most excellent results attend the employment of massage, accompanied with the electro-vapor bath, in the treatment of this troublesome complaint. Massage alone has long enjoyed a high reputation, used in both articular and muscular rheumatism. Dr. Balfour relates the case of a French lady that illustrates well what may be expected from that treatment. When he first saw her "all her fingers were extremely weak, some of them swelled; others so exquisitely painful that she could not suffer them to be touched; she could not lift a wine glass with one hand, but she contrived to do it with both by turning their backs to each other. Both wrist-joints were stiff and painful, but the left could not be moved without the greatest suffering. Both elbow-joints were greatly affected; the left did not possess the natural range of flexion and extension. * * * She could not lift a hand to her head. * * * She had not walked a step for eight years." This case was completely restored to health in five months by massage. Even more brilliant results than this can be ex-

pected if the electro-vapor bath is used in connection with the massage.

Lumbago.—After the patient has taken the electro-vapor bath and a few minutes' rest, he is directed to wipe dry, and submit himself to the following procedure so successfully employed by Laisné: The patient is made to lie on his face, a pillow being placed under the abdomen so that the muscles of the back are relaxed. The operator then places the tips of the fingers, slightly separated, a little below the seat of pain, and to the right of the spine; the fingers are then moved slowly upwards, pressing gently, and at the same time describing a series of small circles. When the seat of pain is passed, this is repeated in a similar way on the other side of the spinous processes. Should the pain be limited to one side, or be more severe on one side than the other, that should have the preference, but in most cases it will be found better to make the movements first on one side and then on the other. The pressure should be gradually increased as the pain decreases. After from twenty to twenty-five minutes working in this way, similar movements should be made with the ball of the thumb and little finger, the whole ending up with the application of a moderately tight bandage.

Growing Pains.—There is a class of rheumatic or neuralgic pains occurring in young people, and known by this name. They yield readily to the massage and electro-vapor bath treatment. People of a larger growth often suffer with vague, uneasy pains in the limbs, back or chest. One course of treatments is generally sufficient to cure them.

Gout.—Excellent results attend the massage and electro-vapor bath treatment in gout. Accepting the suboxidation theory as to the cause of gout this can be accounted for. The food, instead of being oxidized, thoroughly stops short in the process and gives rise to certain insoluby products that accumulate in the blood and set up the train of symptoms known as gout. Such cases suffer from dyspepsia and neuralgia. The perspiration resulting from the bath drives off the suboxidized products; the massage oxidizes the food; and the combination of electricity, vapor and massage cures the dyspeptic condition and neuralgia, and greatly improves the general health. Gouty patients, by placing themselves under this treatment, can be kept in a comfortable condition for years.

Bright's Disease.—Massage and the electro-vapor bath produce some wonderful results in the treatment of this disease. The treatment promotes absorption and improves the circulation, tones up the system, and relieves the kidneys by making the skin do the work of excretion. The method of procedure I adopt when called in to a case of uremic vomiting or dropsy is to order dry cups to the back, followed by a course of massage and electro-vapor baths. The effect is magical; the nausea disappears immediately under the cupping, the headache likewise, and after a few baths the dropsy follows in the wake of the nausea and headache, and the anemic condition is greatly improved by the treatment as well, so that the blood becomes richer, owing to the improvement in digestion.

Dropsy—From heart troubles is also greatly improved by massage. Care should be taken in these cases when giving the bath, however, for high heat may not be well borne in heart disease.

Insomnia.—A treatment at night results in a good night's rest, and there are no disagreeable after-effects. As Graham says in relation to massage itself, and this applies even more to the combination of massage with the electro-vapor bath: "While it is being done, and often for hours afterwards, the subjects are in a blissful state of repose; they feel as if they were enjoying a long rest, or as if they had returned from a refreshing vacation; quite frequently it makes optimists of them for the time being." If, now, they go to bed, a delightful night's rest is certain to follow.

Anemia.—The use of massage and the electro-vapor bath will be found valuable in the treatment of this condition. By acting on the digestive system, by stimulating the nervous system, and by exercising the muscular system, the blood is fed with good material, at the same time cleared and purified, and the anemic condition disappears. Iron may be used in addition to massage and the bath if desired.

Headache.—I am frequently called upon to treat headaches of various types, and I find massage and the electro-vapor baths act well in their cure. Headaches due to anemia of the brain and to the very opposite condition, viz., congestion, yield readily to this treatment. In the latter I use massage of the neck. The relief is almost immediate in most cases. The same may be said regarding neuralgia and "sick" headaches.

Neuralgia.—Sciatica, lumbago, facial neuralgia, all yield to the massage and bath treatment. The combination of massage and bath in the treatment of this class of affections will be found superior to either alone.

Syphilis.—In conjunction with constitutional treatment, massage and the electro-vapor bath will be found very useful. It is to be used for the

general debility in old cases, and will improve the general health wonderfully.

Convalescence.—In the convalescences of various acute and chronic diseases the massage and electro-vapor bath treatment will be found a valuable means of improving the general nutrition and hastening the period of recovery.

Diseases of Women.—A great many diseases peculiar to the female sex are rapidly improved under a course of massage and the electro-vapor bath. It is surprising how much good can be done in the treatment of some of these cases by improving the general health. Nature often comes to the rescue and the local trouble takes care of itself.

I have thus indicated some of the diseases that general massage and the electro-vapor bath will cure or relieve, yet I have said nothing about a large number of diseases in which the treatment can be used to advantage; neither have I spoken of the employment of local massage in joint affections, or of the wonderful results often obtained in the treatment of some of these cases. I shall report cases illustrating all the points so briefly touched upon in general review in this article, from time to time, in the medical journals, so that the profession may know more of the actual results attending the treatment.

CARLSBAD WATERS IN THE TREATMENT OF GOUT AND BILIOUSNESS.

BY J. B. POTSDAMER, M. D., PHILADELPHIA, PA.

MR. B. J., aet. 69, weight 190 pounds, height 5 feet 7½ inches, had an attack of renal colic about twenty-five years ago. Oxalate crystals appeared in the urine. For a time his life was despaired of. Fifteen years ago he began to grow stouter, and had periods of depression. He consulted a physician at that time, who advised horseback exercise, otherwise serious results might follow. This instruction was not carried out. Eleven years ago, while being treated for a colles fracture, left, he had an attack of inflammatory rheumatism, confined to the right shoulder joint. Shortly after this he had another attack of renal colic, not as severe as the first one. Since 1860 he has had occasional attacks of muscular rheumatism, at times quite severe. In the early part of last year he began to complain of pain in the thumbs, which were swollen. He had pain in the toes, but not so marked. The pain in the thumbs kept him awake at night. He takes very little exercise. Diagnosis: Gout. He was placed on Carlsbad waters, the Sprudel being used. He drank three or four wineglassfuls a day, the water always being heated first. Beneficial results were noticed before beginning on the second bottle, as the patient was able to sleep at night. Improvement continued, and after six bottles had been used the pain was gone, and the swelling disappeared. At the present writing, six weeks after this treatment was begun, the patient is perfectly well, having used but ten bottles of the water. The only restriction placed upon Mr. B. J., while drinking the Carlsbad waters, was that he was not to drink any malt, and very little of spirituous liquors. This he did not carry out, as he drank about a glass of beer a day.

Mrs. S. B., aet. 45, of full habit. Has had frequent attacks of biliousness. Was called in to attend her early last fall. Symptoms as follows: Complexion muddy; tongue coated with yellowish fur; bitter taste in the mouth; appetite poor; bowels constipated; some dizziness. Her feet are somewhat swollen. The patient is very stout. On physical examination I found the liver considerably enlarged. Carlsbad Sprudel water was ordered, in wineglassful doses four times a day, *to be taken cold*. The patient soon began to improve. After taking five bottles, is well. The swelling of the feet has disappeared, the bowels are regular.

Mr. S. H., aet. 40; rather plethoric; exhibited symptoms similar to Mrs. B. Feet were not swollen, liver not enlarged. The same treatment was pursued, with a regular diet; was well after taking three bottles.

A Cure for Diabetes.—In a paper recently read by M. Martineau before the Société de Thérapeutique of Paris, he claims to have treated diabetes with invariably good results for ten years past by means of a solution of carbonate of lithium and arsenate of sodium in ærated water, which is taken not only with meals, but whenever the patient is thirsty. He claims by these means to have cured sixty-seven diabetic patients who have been under his care.

Reduction of Hernia.—After taxis has failed the following has succeeded (*St. Louis Med. and Surg. Jour.*): Introduce an elastic tube into the rectum as far as it will go, and slowly inject air through it. The intestinal cords will be seen to distend, and after a short time the tumor will suddenly disappear. The tube must not be withdrawn immediately, but the air is allowed to escape through it first.

—Prof. Sydney Ringer, in his "Hand Book of Therapeutics," 11th edition says:

"I generally find it useful in all forms of children' diarahœa to abstain from milk, and to give instead, barley water and veal broth, or chicken broth, or best of all, Nestle's Food, which I find the best of all food, for children with great delicacy of stomach and intestines."

The New York Medical Times.

A MONTHLY JOURNAL

OF

MEDICINE, SURGERY, AND COLLATERAL SCIENCES.

EDITORS:

EGBERT GUERNSEY, M.D. ALFRED K. HILLS, M.D.

Business Communications should be addressed, "Publishers, 526 Fifth Ave.," and Checks, etc., made payable to THE NEW YORK MEDICAL TIMES.

Published on the First of each month.

OFFICE, 526 FIFTH AVENUE, NEW YORK.

NEW YORK, AUGUST, 1887.

HAHNEMANN ON SECTARIANISM.

The rallying motto of a Sectarian name is incapable of exciting to sober, calm, scientific investigation; it only rouses the explosive spirit of accusations of heresy to a fierce, volcanic flame. Truth and weal of humanity, should be the only motto of the genuine elucidators of the art, and the watch-word of the brotherly, peaceful bond of reunion, without slavish adherence to any sectarian leader, if we would not see the little good that we know completely sacrificed to party spirit and discord.—"Lesser Writings," p. 363.

THE TRUE HAHNEMANNIAN!

IN THE light of the sentiment which stands at the head of our Editorial columns, it is most apparent that the MEDICAL TIMES has been and is the only true Hahnemannian representative in the profession, and those members of the so-called homœopathic school who want to accord with the views of their master, must accept the dicta, the very principle for which we have been fighting these years, and for which we have been so often traduced and abused! Now let our homœopathic contemporaries nail this advice and motto of one who they profess to revere, to their masthead as we have done, and they will have more time for scientific work and be saved the annoyance of personal animosity toward THE TIMES, of which some have shown so much!

How much better it would be for humanity at large if all would accept the motto of the Golden Rule as their ever constant guide, and do away with these distinguishing designations, these terms of questionable definition, these non-essentials, these uncharitable accusations and judgments, for it does harm to contra-distinguish as is done in the profession, and leads to opprobrious epithets, to political methods and terms, as we have often seen, to the detriment of all concerned!

The American Institute of Homœopathy formally adopted the dictionary definition of the term "regular," with which action there may be no objection, although superfluous, for all are supposed to accept this authority without publicly asserting it!

We would prefer with Hahnemann, a state of things which would make this and all distinguishing words unnecessary!

We would suggest to our "homœopathic" brethren as a "true basis of harmony" the adoption of the words of Hahnemann to which we have referred!

We propose shortly to publish a series of articles which will be in the form of studies of the writings of this remarkable man, Hahnemann.

If we are not mistaken some of these self-styled Hahnemannians, some of the vaunted homœopathists of the present day, will stand convicted of gross assumption!

The great majority of practitioners we are confident will be shown to be assuming a rôle to which they are not entitled by any fair interpretation of language.

With Hahnemann's theories we shall have to do, only so far as they have led to facts which have been borne out by experience and stand to-day as real guides in practice, and these we shall try to present in the light they deserve, and in a manner to be of practical service to such as desire to consider the subject from the standpoint of truth, justice, and progress.

It is apparent to us from what we read, that Hahnemann never intended when he coined the words "homœopathy" and "allœopathy," that they should be used to designate Schools of Medicine. They are only used by him to distinguish the modus operandi of drugs, and as such are not in the slightest degree objectionable.

THE TIMES has asked no more than is warranted by the words of Hahnemann himself when it seeks to drop the sectarian designation, that "the little good that we know" may not be "completely sacrificed to party spirit and discord!"

A QUESTION FOR THE NATIONAL SCIENTIFIC ASSOCIATION.

THE National Scientific Association will meet in New York City this month, and will be worthily entertained by the New York Academy of Science. Prominent among the questions which will undoubtedly receive the most profound attention of the association will be that psychic force which links the world of matter with that of mind, and how it acts and reacts one upon the other as has been made manifest during the past two years. The effort of a few pure and disinterested men a short time ago to read Dr. Barker out of the Academy of Medicine, on the ground that he had claimed a French diploma, which he did not possess, was speedily followed by an effort of those same honest and unselfish men of the old code, zealous only for the cause of science and the good of humanity, to capture the International Medical Congress, which is to meet at Washington next month, an institution which has heretofore been non-partisan and open to all scientists, and fetter it with its own iron-bound and exclusive rules. The disturbance in the medical profession which was felt in every city and town in the United States was followed by an earthquake which burried in ruins a great city and made its influence felt from one end of the Atlantic coast to the other. It is an interesting fact that the earthquake, and the great cyclones at the west should follow so speedily the great mental disturbance in the medical profession. By some strange influence or law, which perhaps the united wisdom of the assembled scientists in convention may determine, those great forces which shook and rent the crust of the earth and swept over a continent in cyclones and storms still seem disturbing the theological and medical world, especially two great divisions of them, the American Institute of Homœopathy as shown at its meeting in Saratoga, and the Congregational Church, in its theology and its grand old seminary at Andover, Mass.

In the former, Dr. T. F. Allen, the compiler of an enclycopedia of vast proportions, which is possibly consulted occasionally by some member of the profession, when the committee on medical literature, whose duty it is to report such medical pabulum as it is safe to use, made its report, arose and moved that THE NEW YORK MEDICAL TIMES be excluded from the journals recommended to the Institute, and with that blending of fact and fiction which seems to be the normal condition of his brain assigned as a reason, that the TIMES is not a homœopathic journal, which is a fact, and that it is bitterly opposed to homœopathy, which is a fiction. The motion was promptly seconded by Dr. Pemberton Dudley, editor of *The Hahnemannian*. Fortunately the meeting was at Saratoga, in the midst of nature's great laboratory of health giving waters, which bubbled up in a hundred fountains, and which, freely partaken by the members of the convention, undoubtedly did much to soothe and quiet that psychic force let loose by Drs. Allen and Pemberton Dudley. There is no place like Saratoga for medical conventions. The theologians had a harder time of it and President Smyth and the other professors, who agreed with him had to stand in the clear cool air of Andover Hill, the focus of the Congregational Church, and meet the question there and then, if in teaching the doctrine that some of the heathen are finally saved they were not striking at the very cornerstone of the Seminary, that there was no salvation for the heathen but that they all went to hell. Such it was claimed was the teaching of the founder of the seminary, and such the board of visitors decided in solemn council assembled must still be its teaching, or the seminary as a Congregational institution cease to exist. And so the president and the professors were ordered to vacate their chairs, which they declined doing until the great question of whether the heathen all go to hell or only a part is finally adjudicated by the Supreme Court of Massachusetts. Pending that decision we trust the scientific convention soon to assemble in this city may cast some light upon the peculiar phenomena of psychic force which has disturbed so largely within the past few years the boundless worlds of mind and matter.

DR. SIDNEY RINGER, F.R.S., has been appointed the successor of the late Dr. Wilson Fox, to the Holme Professorship of Clinical Medicine of the University College, London.

HOUSE OF REFUGE FOR WOMEN.

THERE is nothing which shows the advance of that higher civilization and far-seeing statesmanship which strikes at the root of evil, making the world better by preventing crime, than those institutions endowed by the State and by private munificence, which seek to check the progress of crime by getting at the cause and removing it before its deadly fruit has ripened. Hospitals and asylums and dispensaries meet a great public want in the present relief given to the poor and suffering, but those institutions which gather from the gutter and from the homes of those steeped in poverty so deep that hunger and starvation are always at the door—the waifs of humanity, and find them homes where manhood and womanhood can be developed in their higher qualities; and those institutions which gather within their folds the young in their first violation of law, their first essay in crime, and teach them the beauty of a life of obedience to law, really strike at the root of that evil which render prisons and asylums a necessity. Every child saved from a life of crime diminishes taxation and adds to the wealth of society by increasing its power of production. The first experiment in this State in the way of an institution in which can be gathered young women in their first violation of law has recently gone into effect in the "Woman's House of Refuge, at Hudson." The State has purchased nearly a hundred acres of ground, and upon a beautiful plateau a little south of the City of Hudson, and overlooking the river and the surrounding country for a long distance, has erected the buildings of the reformatory. These are seven in number and capable of accommodating 250 prisoners, girls and young women, from 15 to 30, from all parts of the State except New York and Brooklyn, guilty of minor crimes, for which, heretofore, they have been shut up in prisons, and, in nine cases out of ten, they have gone out at the expiration of their sentence to prey upon society. On their arrival they are placed in the jail, which stands at the rear of the grounds. From the jail, on showing a disposition to reform, they are removed to a cottage, of which there are four, two at each side of the grounds, where the work of education is commenced. They are instructed in the elementary principles of education, and taught to sew, cook, wash, and all the duties of good housekeeping, as well as many of the trades by which they can obtain a respectable living. As they show signs of improvement they are advanced from one cottage to another, more and more restraint being thrown off, until they mingle with the executive family in the main building. They are sentenced for a definite time, but that time can be cut short upon proper signs of reformation at the discretion of the authorities. The hospital is as complete in every particular as the skill and science of the architect—Mr. Miller, of Ithaca—aided by the commissioners, can make it, having its sick, convalescent and operating rooms. When we say that the whole property, with all the buildings complete and thoroughly furnished, only cost the State $150,000, it will be readily seen no money has been wasted. The commissioners who have developed and put in working order the first reformatory for women in the State are Gen. J. W. Hoysradt and Judge John Cadman, Hudson, Gen. Tracy, of Albany, and Mrs. Charles Spencer and Mrs. Egbert Guernsey, of New York City. The commissioners have gathered together to assist them in their work all the information they could obtain in this and other countries, and have been untiring in their efforts to establish an institution which would be looked upon with pride by the State and be an instrument for good through all time. The act for the establishment of this institution was passed during the administration of Governor Cornell, and the work has always received his warmest sympathy and support.

PROFESSIONAL MAGNANIMITY.

AN INTERESTING anecdote of Dr. Quin, the introducer of homœopathy into England, and the founder of the British Homœopathic Society, is related by Mr. Hugh Cameron, in *The Monthly Homœopathic Review*, May, 1887: A physician of large practice and reputation in the fashionable circles was notorious, even above his colleagues, for the virulence of his attacks on homœopathy, and for his personal antipathy to Dr. Quin, whom he never lost an opportunity of abusing, especially when he found himself among Quin's patients or friends. One day Dr. Quin called to see a patient in a family who were all stanch homœopaths, and very intimate friends of his, and with whom a

young lady, a near relative, a patient of this physician, was at the time on a visit. When he entered, the lady of the house exclaimed: "Oh, Dr. Quin, if you had come in ten minutes sooner you would have found Dr. So-and-So," meaning this physician, "here, and we should have been compelled then to send for the police to keep the peace, for he was so violent in his language toward you that So-and-So," meaning her son, "had to put him down." "Oh," said Quin, "never mind him poor fellow; it pleases him and cannot hurt me.' The young lady for whom the physician prescribed asked Dr. Quin to look at the prescription. On doing so he was terribly shocked to find that pure sulphuric acid was ordered in fatal doses. At that moment his most bitter enemy was completely in his power, and had he given the most distant hint of the danger the girl had run, this physician would have been ruined in a month, for, in the rank of society among which his practice lay every member of it knew every other, and the news of the mistake would have run like wildfire through it. But Quin was incapable of such ignoble revenge, and his only thought was how best to rescue his enemy from his terrible disaster. By a great effort he concealed any expression of emotion in his face, and said to the lady very quietly, "this is a very good prescription, speaking allopathically, but it consists chiefly of sulphuric acid and will likely do you good. I am driving past your chemist's shop and will take it there and save you the trouble of sending." I need not say he did not go to the chemist's shop, he drove straight to the physician's house, sent in his card, and was soon admitted. He found him standing in the middle of the room drawn up to his full height (and he was very tall), with his face set to a most frowning expression of offended virtue. Addressing Dr. Quin, he said: "To what am I indebted, sir, for the honor of this visit?" laying sarcastic emphasis on the word "honor." "To this, sir," said Quinn, presenting the prescription. In a moment, on looking at his prescription, the expression of his face became one of terror and despair, and he gasped out in a choked voice: "How did you get this?" Quin, greatly distressed at the sight of his agony and eager to relieve it, said: "Oh! don't be alarmed; no one knows of this mistake but you and I, and I shall never open my mouth about it." He then told all that had happened. When he had finished, the physician seized Quin's hand in both of his, and sobbed out: "You are most generous. I did not deserve this at your hands. You have heaped coals of fire on my head," and dropped into a chair where he sobbed like a child. When he calmed they got into amicable conversation, he wrote out a fresh prescription, and as Quin took it and was going away, this poor man said "never shall a word about you pass my lips that isn't admiration, and I only wish that I could extend the same admiration to the system, but that can never be." Quin, always ready to cheer a man who was down and make him laugh, said "oh! don't you be so sure of that, for if you go on reducing your doses at this rate you will soon become such a high dilutionist that a steady old Hahnemannian like me will have to disown you." They parted with a good laugh, and became good friends forever after. Although I was at the time on the most intimate and confidential terms with Dr. Quin, I never heard of this incident till years afterward; at that latter time a patient of mine was anxious to have this physician's opinion about some symptoms of his case, and asked me to meet him. I readily consented to do so, but expressed strong doubts whether he would meet me, on which the patient assured me that I was mistaken, and that he would be delighted to do so. At the consultation nothing could be more genial or friendly than he was. My perplexity to account for all this was very great, and I was dumbfounded when he asked me, "how is that dear little fellow, Quin?" and before I could answer, added, "He is as generous in heart as he is brilliant in wit." As soon as I was released, I rushed to Quin and asked him to explain this puzzle. He tried to evade my question, but I was not to be put off, and at last, under a solemn promise of absolute secrecy from me, he told me the whole matter, just as I have related it, because, he said, he thought it was but justice to this physician, that I should know it, as he thought it very probable that I should see much of him in future, which turned out to be the case, for we became intimate friends.

THE TRAINED NURSE.

THE *Medical Standard* thinks the trained nurse is an institution in advance of the Saucy Gamp of olden time, but notwithstanding she has been excessively idolized by amateur philanthropists very far behind what is needed as a skilled nurse. The objection that hospital training does not fit a nurse for the duties of the sick room outside of the hospital might apply equally to the physician after his graduation and hospital course. In both cases the training in the hospital and that acquired from books must be supplemented by a certain amount of delicacy, tact and practical common sense. Failing in these either the physician or nurse would be out of place, however much experience they might have in private practice. The editor of the *Standard* must have been particularly unfortunate in his experience of trained nurses if he finds, as he says, "the intelligent, compassionate, tasteful servant answers much better than the average trained nurse."

In most training schools those who wish to be nurses spend a two months probation before entering regularly upon their duties, that some estimate may be reached of their fitness for the profession they have chosen. If they show a lack of tact and intelligence they are refused admission into the institution. There may be some bad trained nurses who would have succeeded at the washtub or in the kitchen, as there may be some physicians who would have made excellent coachmen, but who are entirely out of place in the sick room; but we would hardly think of judging a whole profession by here and there one proved to be incompetent. The trained nurse is the outgrowth of the more advanced intelligence of our profession, and fills almost as an important a position in the sick room as the physician himself.

ON THE PREVENTION OF WRITER'S CRAMP.

PROFESSOR FRANK WOODBURY, in a paper read before the Philadelphia County Medical Society, and published in the *Annals of Hygiene*, October 1, 1886, offers the following suggestions regarding a class of diseases met with in every walk of life, but most frequently among those persons who use the pen constantly in writing:

Although relief may be afforded by galvanism, massage and passive movements, as in Wolff's method, Scrivener's palsy, or writer's cramp, is scarcely susceptible of complete cure. For this reason the prevention of such a disabling malady becomes of the first importance.

The first of the means to which I invite attention, says the author, is the manner of holding the pen in writing. I wish to insist upon the correctness of the view which regards a faulty system of writing as the most prolific cause of this disorder. I maintain that while the pen is held by the fingers, the movement of writing should be made by the hand and not by the fingers. Children at school should never be allowed to write or work their exercises with short stumps of pencils. Whenever the hand is engaged in the act of writing, the pencil or pen-holder should be long enough to pass from tip of the second finger to a point a little beyond the metacarpo-phalangeal joint of the first finger, being held in this position by a light pressure of the thumb, the fore-finger lightly resting upon the upper surface of the holder just above the pen. The anterior surface of the fore-arm is allowed to rest upon the table or desk, while the whole hand, supported upon the extremity of the little finger, moves with each stroke of the pen. Writing by this method is less fatiguing that when done principally by the fingers.

The character of the pen-holder is by no means unimportant, especially in the early stage of the disorder. Some authorities recommend, instead of the pen, to use a lead pencil only, or a stylograph or fluid pencil. Many pen-holders have a smooth metal barrel or sheath for the pen, which, especially in warm weather, has a disagreeable, slippery or greasy feeling to the fingers. Although not much importance is to be attached to the statement that electrical currents are generated by the scratching of the pen upon the surface of the paper, it will be found that decided relief is obtained from having the holder made of some non-conducting material, such as hard rubber or cork. A simple but very useful device is a soft rubber tube or shield, which is to be slipped

over the part of the penholder which comes in contact with the fingers. The amount of comfort to be obtained from this by persons who are very sensitive to peripheral impressions is entirely out of proportion to its trifling cost.

In cases where the spasm is a marked feature, and the patient finds himself stabbing the paper with his pen, I think that a form of holder which I invented some years ago might be serviceable by keeping the point of the pen at a uniform degree of pressure upon the paper, and by imparting a sense of security to the patient. The only peculiarity about this pen-holder for the prevention of writer's cramp is the separation of the pen and its holder from the portion which is grasped by the fingers in the act of writing. The instrument is an ordinary pen-holder with the addition of an outside sleeve surrounding its lower portion, which is held in place by a concealed spring, and which is movable in one direction (downward) to the extent of about half an inch. The object of this is that if undue pressure be made upon the point of the pen, the spring will yield in proportion to the force and allow the fingers to be extended without perforating the paper; the usual relative position of the fingers and pen will be at once restored as soon as the pressure is intermitted. This pen-holder could be made in several sizes to suit different persons, since some prefer a thick holder; and the stick could be made of cork or hollow, vulcanized rubber, so as to secure the necessary lightness.

Variously shaped pen-holders have been constructed for the purpose of assisting the subjects of this annoying affection to write. One of Dr. Poore's patients used a pen-holder in the shape of a "top," which he grasped with his whole hand. Velpeau's well-known apparatus consists of an oblong ball, made of wood or hard rubber, to be held in the hand. To this are attached a pair of half-rings, which serve as rests for the index and middle fingers. A pen-holder passes through the neck of the ball at a convenient place near the extremity, which can be adjusted and made firm by a thumb-screw. With this apparatus a person affected with writer's cramp may be enabled to do a certain amount of writing that under ordinary circumstances would be entirely beyond his powers to accomplish. Matthieu's instrument is also supplied by the surgical instrument makers. It consists of two rings for the index finger, and a half ring, properly distanced from the others, on which to rest the thumb. To these is attached a spring slide, into which a common pen-holder can be inserted. These devices, however, are useful where the disorder already exists, and are never employed with a view to its prevention.

Until the phonograph, or some modification of it shall come into general use, a large proportion of the permanent record of the daily work of the world must be committed to writing by hand. This brings up the very interesting question of a substitute for the pen. One of the most useful of modern inventions is the type-writer, which I consider very efficient in preventing writer's cramp. It is now largely in use among business men, but especially is it being adopted by authors, ministers, lawyers, editors; all of whom are accustomed to compose as they write, and are therefore, in my opinion, more liable to be attacked by this annoying disability. Dr. Lincoln, who is chairman of the Department of Health of the Social Science Association, considers it serviceable even after the disorder has been developed. In his work on "School and Industrial Hygiene" he says: "The temporary use of the type-writing machine will often prove a great boon, permitting a continuation of work while resting the affected muscles."

In comparison with the ordinary method of writing, the advantage is all on the side of the type-writer. Instead of having one hand actively employed in performing very rapid and highly complicated movements while the other is almost absolutely idle (and probably this equally applies to the motor areas of the cerebral hemispheres), we see both hands engaged in movements which suggest playing on the piano, but are less laborious. From personal experience I can say that with its aid copying or extemporaneous writing is less fatiguing than with the pen.

After a trial of several, and an examination of others, I unhesitatingly pronounce the Remington No. 2 the best type-writing machine for my purpose that I have yet seen.

The cabinet machine, which has special advant

ages for physicians, because when not in use it is out of sight and out of mind, and is not an eyesore in the office like the ordinary type-writer with its special stand. A recent editorial in the *Journal of the American Medical Association*, entitled "Medical Writers and Type-Writers," concludes with a paragraph which is so appropriate that I will quote it in bringing this article to a close. The editor says:

"There are several reasons why medical men who write should use the type-writer. In the first place as a matter of economy of time, and hence, often of money. It is easily seen that there is a great saving of time with a machine that will do a piece of work in one-half or one-third the time that it can be done by hand; and this is easily accomplished with a type writer. In the second place the machine promotes accuracy, especially in thinking, for two reasons: Being more rapid than the pen, the thoughts of the writer do not wander so far ahead of his work, and should he wish to refer to what has been written he can see it at a glance, as on a printed page. A third reason is, that the person who uses a type-writer sits erect, and can thus work for a longer time without fatigue than when bending over, as in writing with a pen. The machine further promotes accuracy in the printing office—a great source of comfort to writers; and it promotes a degree of accuracy on the part of the writer in that he will not make a wavy line, or two or three letters and an apostrophe, do duty for a long word, and his punctuation marks, if not more correct, will at least be more numerous.

"With a machine, therefore, writing becomes a pleasure, with none of the discomforts accidental and incidental to the use of the pen."

DR. AULDE, of Philadelphia, narrates several cases of chronic joint affection especially attended with stiffness, the result of rheumatism, which have entirely yielded, after every other treatment has failed, to an application of salicylic acid and manipulation. His formula is one part of salicylic acid, four parts of lanolin, with sufficient olive oil to make into a soft ointment. The ointment is thoroughly rubbed on the part affected with the hand every night, for three successive nights, then discontinued for three nights, when, if it is needed it can be applied again. To protect clothing, the joints should be covered with sheet cotton or oil paper. Manipulation at the same time should be used, being careful not to produce imflammation by undue harshness.

Extravagance in College.—The very parents who speak so bitterly of the encouragement given to young men's extravagance by the modern college life have carefully trained their sons for just the life which they have found. Usually men in moderate circumstances, they have never compelled their sons to earn a dollar in their lives, or to know the cost or value of money, or to deny themselves anything within their reach, or to do anything except spend money when a favorable opportunity offered. The sons, passing for the first time beyond the father's eye, and able to plead circumstances which parents cannot deny from personal knowledge, are in a fair position to deplete the paternal pocket-book, and have never been trained to refrain from improving such an opportunity. It is not for his own selfish gratification that the son joins this or that college society, or takes all the college papers, or "goes with the nine" to watch an intercollegiate game in another college town, or does any of the other things for which his father has to pay,—not at all; it is only because he would be ostracised in college if he refrained from such indulgences. Such are the statements which accompany the periodical petitions for checks; and the father, finding it easier to curse college extravagance than to take the trouble of ascertaning the true state of the case, continues his mistraining of the boy by paying his bills until, at the end of the college course, the son is turned loose upon the world, to find at last what a dollar really means.—*The Century* for July, "Topics of the Times."

Shakespeare Upon Ferran.—Dr. E. O. Shakespeare who has recently returned from a tour of investigation into cholera by special appointment of the United States Government, remarked in a lecture that after a personal visit to Ferran, in Valencia, and an examination of his methods of investigation, he was prepared to indorse the verdict of the French Commission with regard to the condition of his laboratory, but as to Ferran, himself, he arrived at a different conclusion. He was impressed by his modest bearing, and believed him a cultured gentleman, possessed of no mean skill as a bacteriologist. With regard to the result of Ferran's inoculations, Dr. Shakespeare demonstrated by the official returns made by the Government officers, who are not friendly to Ferran, that there was a sudden and marked reduction in the number of cases and in the mortality in several villages after the innoculations were begun. This measure having apparently about six times the value of ordinary hygienic precautions in checking the epidemic. The facts concerning innoculation, so far as have been reported officially, seem to indicate the importance of making, in future epidemics, this method the subject of a searching scientific investigation, such as it has not received up to the present time.

"Medical" Nerve Stretching.—A Scotch Surgeon describes marvellous success in the treatment of sciatica, by forcibly flexing the afflicted limb upon the abdomen, and retaining it there for a moment or so.

CORRESPONDENCE.

To the Editors of The New York Medical Times:

On page 76 of the July (1887) number of *The Advance*, among the reports of the transactions of the American Institute of Homœopathy, held at Saratoga, June 26th, 1887, we find that upon the motion of Dr. T. F. Allen, seconded by Drs. Sparhawk and Pemberton Dudley, THE NEW YORK MEDICAL TIMES was erased from the proceedings of the Institute, and that it was not returned as a homœopathic journal.

As a member of the Institute, please publish this, my protest, against that "*Boycott.*" On several occasions I have referred to THE NEW YORK MEDICAL TIMES, and have tried to persuade others to adopt their honest plan: they did strike off from the title of the journal the word *Homœopathic* and insert in its stead *Medical.* The TIMES declined honestly to trade on an assumed name; and why should others continue to trade on a name? The TIMES, in its July number, publishes an addess of the President of the Institute, while Dr. T. F. Allen accuses the TIMES that it persistently and steadily fights Homœopathy in season and out of season. The TIMES is professedly a medical journal, but not a homœopathic journal, and it should be perfectly indifferent to the proposed boycott; as a medical journal it should and will stand on its own merits. It will be taken and be read by medical men, who may very much differ with the editors, as long as they continue to give their subscribers well written papers. Is the *North American Journal of Homœopathy* under the direction of Dr. T. F. Allen a truly homœopathic journal? We absolutely deny it, and it has been the aim of the *North American Journal of Homœopathy* to villify the course of all true Homœopaths, and the infinitesimal doses of true Homœopathy exhibited in that journal are few and far apart. But the height of presumptiveness was reached when Dr. Pemberton Dudley seconded Dr. Allen's motion. The same Dr. Dudley is the leading Editor of the *Hahnemannian Monthly*, a journal expressing the Homœopathic views of the Hannemann Medical College of Philadelphia, and the Hahnemann Club, The April (1887) number of said journal contains on page 237 an editorial—"*An Opportunity and a Responsibility.*" The editor introduces the paper by saying: "In THE NEW YORK MEDICAL TIMES for March appears a letter from the pen of Dr. E. C. Price, of Baltimore some of the sentiments are so much in accord with our own views that we propose to use them," etc. Dr. Dudley contends for various laws of cure even if they are diametricaly opposed one to another, still he trades on a name, *Hahnemannian.* As Hannemann never taught such illogical absurdities, and as Dr. Dudley copies from the TIMES, would it not be an act of charity to suggest to Dr. Dudley & Co. to do the honest thing, which the TIMES did, and erase from the title page of the journal the word Hahnemannian and insert in its place—Medical?

Philadelphia, July 22d, 1887. AD. LIPPE, M. D.

THE TWO DRS BOWDITCH.

Editors of The New York Medical Times:

THE NEW YORK MEDICAL TIMES for July 1887, confuses names and persons. Dr. Vincent Y. Bowditch "delivered the lecture in Boston about a year ago," with fairness and good will. Dr. H. I. Bowditch (the father of the former) delivered the lecture before the Rhode Island Society.

Respectfully, C. WESSELHŒFT.

OBITUARY.

Dr. Woolsey Johnson, Health Commissioner, of the City of New York, died at the New York Hospital, June 21st, of diabetes at the age of forty-five years. Dr. Johnson was for many years a surgeon of the New York Eye and Ear Hospital, and one of the attending physicians of the New York Hospital. The Mayor has appointed to succeed Dr. Johnson as Health Commissioner Dr. Bryant, at one time Surgeon General of the State, and the author of a very complete work on Surgery. No better appointment could have been made.

Injuriousness of Filters.—"The best laid schemes of mice and men gang aft aglee." A curious illustration of the truth of the poet's observation (remaks the *American Homœopathist*) appears in a recent experiment made by Dr. G. T. Swarts, and recorded in the *Boston Medical and Surgical Journal*, wherein one of the most generally used appliances for securing the purity of drinking-water, the filter. is shown to be a direct aid in its contamination. The results of his investigations show that while some filters, when first used, successfully remove a certain proportion of organisms from the water, other tests made seventeen days later showed in every case a marked increase in the number of colonies of bacteria in the filtered compared with the unfiltered water. These, chiefly water bacteria, are practically harmless as constituents of drinking-water unless they remain, as the experiments show they do, in the filters, under conditions favorable to the development of those products of decomposition intermediate between proteid matter and its final resolution. As there is present also a portion of the soluble albumenoids of the water there is then collocated both the micro-organisms and their culture medium; and with a proper temperature, such as is often present where such filters are in use, all the conditions requisite for the contamination of the filtered water with the complete series of the soluble products of decomposition are present. How great the increase of bacteria under these circumstances may be is shown in the statement, that while the unfiltered water contained thirty-six colonies of growth, the filtered water showed the presence of colonies to the number of two thousand, nine thousand and ten thousand, and an examination the seventieth day showed an increase in one case of over one hundred thousand colonies. The potency of the filter as an aid to the dissemination of disease, if a few germs of infection should find lodgment in such a fertile soil, is sufficiently obvious to require no comment.

Removal of Foreign Bodies from the Nose.—Dr. E. M. Holland, in the *Medical World*, says that the following mode of procedure has proven uniformly successful in his practice: the child sitting upright on its mother's lap is asked to open its mouth. The doctor then places his index finger on the outside of the child's nose over the right nostril, and places his mouth over that of the child, and makes firm pressure with the fingers on the nose, to prevent the escape of air through that nostril. Consequently the pressure of air is behind the foreign body, when he gives a quick, hard blow, with his lips closed firmly over the child's mouth. The substance will fly out of the child's nose with considerable force. "No prodding and punching with hook, etc., and not the least pain whatever."

TRANSLATIONS, GLEANINGS, ETC.

To Ascertain if Gangrene is Likely to Follow Severe Injury of a Limb.—Dr. W. Scott Lang (*Ed. Med. Journ.*, Jan., 1887) advises elevating the injured member in order to render it temporarily anemic; next applying an elastic bandage or tourniquet for a minute; then lowering the limb and removing the tourniquet; when, if sufficient circulation remains, the part beyond the seat of injury will blush rosy-red, and will show in an unmistakable manner the condition of the blood vessels. This expedient was adopted by the writer in a bad case of railway-crush of both bones of the leg, where the limb was almost dangling and apparently hopeless. Under antiseptic treatment (after removal of fragments of bone and securing bleeding points) the boy made an excellent recovery with a useful limb.

Cow's Milk for Nursing Children.—In an extremely interesting paper upon the nutrition of infants with cow's milk (*Med. Wochenschrift*, of Munich; *Arch of Bdratrics*, Jan., 1887) Professor Soxhlet starts out with the principle which has been laid down by Lister, and more recently by Escherich, that milk is destitute of germs in the glands in which it is secreted. If, therefore, milk undergoes fermentation, it is because organisms which produce fermentation have reached it from without. Two principal factors obtain as to the introduction of the agents which cause infection of the milk: on the one hand we have the food, which is supplied to the cows, some of which is especially rich in micro-organisms; and on the other there are the excrements which so often defile their stables, and which also depend in great measure upon the character of the food of the cows for the possession of their fermentescible agents. The more the milk is defiled by these excrementitious matters, the quicker will fermentation set in. Independently of these germs, there is another element which plays a considerable part in the fermentation of milk. This is found in the relatively high temperature to which milk is exposed which is to be used as food for infants. It has been experimentally shown that the lower the temperature the more restrained are the development and multiplication of inferior organisms. The fermentation of milk is to be remedied by as complete a sterilization of it as possible, and the following method is suggested by the author: fresh milk is to be turned into flasks which are thoroughly cleansed and then closed with a rubber stopper. Under the stopper there should be an empty space of the volume of several centimeters. The flasks are then plunged up to the neck in a vessel of water under which an alcohol lamp is kept burning. After the water has reached the boiling-point and the milk has risen sufficiently in the flask, the rubber stopper is secured by means of a small glass cone. The water is then allowed to boil thirty or forty minutes longer. After this process has been repeated for two or three consecutive days, a sterilized milk will be the result, which may be kept from three to four weeks without undergoing fermentation. This milk will have no harmful effect upon the digestive apparatus of infants and constitutes a mode of ailmentation far superior to ordinary artificial nourishment.

At a meeting of the Pharmaceutical Society of St. Petersburg last November, Dr. Martenson brought forward the subject of milk conservation, and in referring to the benefits that had resulted from the establishment of an official control of the milk supply upon scientific principles he expressed the opinion that the comparatively small chemical differences of composition between human milk and the milk of cows were probably not sufficient to account alone for the differences observed in feeding infants with these two kinds of milk. At least the observations of Dr. Biel in reference to the albuminoid material of kumys and kefir did not appear to him to admit of the idea that there was any specific difference between the casein of human milk and that of cow's milk. Having from this view of the subject had his attention drawn to Professor Soxhlet's paper, experiments were very soon after its appearance carried out at the Child's Hospital of Prince Oldenberg to try the efficacy of sterilization. The results have been so successful that it is now the constant practice to keep two sets of apparatus at work. According to the observations of Dr. D. Mayer, the chief physician of the therapeutical department of the Hospital, the sterilized milk was found to have the effect of rendering the evacuations perfectly normal even in cases where intestinal catarrh was in an advanced stage. Dr. Martenson also confirmed the statement that milk could be kept quite fresh and good for upwards of three months at the ordinary temperature of a sitting room after having having been sterilized as Dr. Soxhlet directs. With the exception of a slight taste of caoutchouc derived from the stopper, he found that milk which had been kept in this way was indistinguishable from good fresh milk.

Late Discoveries.—The medical journals for the last ten years have given accounts of wonderful discoveries in surgical science and of their application in practice—the filling up of large, deep wounds with sponge, and the organization and assimilation of the latter; skin grafting, bone grafting, and the successful adjustment and regrowth of fingers. Recently, two other wonderful discoveries have been reported, and are described as follows in the *Buffalo Med. and Surg. Journal:* one is the organization of rubber within the animal tissues; the other, the organizing of blood clots, their formation into new tissue, and the application of them to the surer and better healing of surgical wounds.

As to the first, it appears that Prof. Vanclair, of France, had, in a certain case, inserted a drainage tube, of ordinary grey vulcanized rubber, one and one-fourth inches in length and one-fifth in diameter, and that this, at the end of seven months, seemed to have undergone partial absorbtion.

But on examining it with a microscope, it was found that the substance of the rubber had become truly organized; that the lower end of the tube had become assimilated to the surrounding tissue, and had wholly lost its original form; that the part of the tube next above this had lost its original shape and appearance and had acquired a complex structure, showing fine connecting tissue fibres, with cells of various forms between them, and very numerous capillary blood vessels.

The other discovery was by Schede, a German expert. His reported results are almost marvellous; the blood fills the wound cavity completely, clots, and is gradually replaced by permanent tissue formation. By this method resection (amputation) of large joints has healed by primary union, and large portions of the articular ends of bone have been removed without impairment of their articular function. Two hundred and forty-one opera-

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tions are recorded by Schede, nearly all of which have healed under one dressing by primary union.

The operations included the amputation of forty large joints, with thirty-seven recovering, with no change of dressing and no leakage. The wound having been duly prepared, the blood is let in and left to organize, the whole being covered with protective silk and other dressing.

Etiology of Pruritus Pudendi (Dr. E. S. McKee).—*Predisposing causes.*—Different diseases of the neighboring parts, vulva, vagina, urethra, uterus, etc. Pregnancy, general depreciation of the health, indolent, luxurious and enervating habits; syphilis; gouty and rheumatic, lithiatic, neurotic, diabetic, tubercular, lymphatic, asthenic tendencies; Bright's disease; menopause.

Exciting causes.—Irritating discharges from leucorrhea, especially uterine, the flow of the menses; cancer; incontinence of urine, diabetes, gonorrhœa, diseases of the urethra, bladder and kidneys. Strongly acid or alkaline urine, irritating discharges; local inflammation and irritation of vulva, vaginitis, congestion, eruptions, herpes, eczema, erythema, scabies, pediculi pubis, oxyuris vermicularis, ascarides, masturbation, venereal warts, urethral carbuncle, want of cleanliness, sexual excitement and erection of the clitoris. It is also laid to a general wear and tear of the nervous system. Irritating matter is carried to every part of the body by the blood. Pain is elicited at certain elective points, one of which is the vulva. In some obviously inflammatory cases it is hard to say whether the neuroses or inflammation predominates. In many of the most painful of these disorders there is no obvious inflammation, and in others, when inflammation is obvious enough, the pain, though generally troublesome, is more endurable. Those cases which occur in women about the climacteric period, are found generally in those who have a tendency to obesity, and who often have eczema. It is frequently found in those young women who sit much, and who are subject to emotional and other centric nervous influences. Barnes says: "there must be exaggerated centric irritability as well as an excentric irritation to produce marked forms of pruritus. This is why it is so marked in pregnancy." Many obstetricians confirm the observation of McClintock, that pruritus vulvæ is one of the earliest symtoms of cancer of the uterus.

Infused Beverages and Digestion.—James W. Fraser, M. D., concludgs an article in the *Journal of Anatomy and Physiology* for April, on The Action of Infused Beverages on the Peptic and Pancreatic Digestion of the Chief Dietetic Proximate Principles, as follows: The dietetic advice to be drawn from these experiments may be stated briefly: 1. That it is better not to eat most albuminoid food-stuffs at the same time as infused beverages are taken, for it has been shown that their digestion will in most cases be retarded, though there are possible exceptions. Absorption may be rendered more rapid, but there is a loss of nutritive substance. On the other hand, the digestion of starchy food appears to be assisted by tea and coffee and gluten, the albuminoid of flour, has been seen to be the principle least retarded in digestion by tea, and it only comes third in the list from the top with cocoa, while coffee has apparently much greater retarding action on it. From this it appears that bread is the natural accompaniment of tea and cocoa when used as the beverages at a meal. Perhaps the action of coffee is the reason why, in this country, it is usually drunk alone or at breakfast, a meal which consists of much meat, and of meats (eggs and salt meats) which are not much retarded in digestion by coffee. 2. That eggs are the best form of animal food to be taken along with infused beverages, and that apparently they are best boiled lightly if tea, hard boiled if coffee or cocoa is the beverage. 3. That the casein of the milk and cream taken with the beverages is probably absorbed in a large degree from the stomach. 4. That the butter used with bread undergoes digestion more slowly in presence of tea, but more quickly in the presence of coffee or cocoa; that is, if the fats of butter are influenced in a similar way to oleine. 5. That the use of coffee and cocoa as eqcipients for cod liver oil, etc., appears not only to depend on their pronounced tastes but also on their action in assisting the digestion of fats.

Pasteurism in Russia.—The operations of the Russian Pasteur Institute at Odessa have proved a signal failure, says the *Buffalo M. and S. Jour.* One-third of all the patients treated have died, and it seems highly probable that some of the deaths are due solely to the treatment. The following case, from *Novœ Vremia*, will serve as an illustration: In the month of July, 1886, Dr. Arthur Stoboi was bitten by a dog supposed to be affected with rabies. The dog was immediately sent to the institute of Dr. Boniville, in Odessa, and was there treated according to the system of Pasteur. On the 9th of November he experienced a severe pain in the place where the virus had been inoculated by the physician, and two days afterward died of rabies. The dog which bit the boy, however, is still alive, and has, up to the present time, shown no symptoms of hydrophobia. We must thus necessarily attribute the death to the treatment alone.

Rubber Nipples: Supplementary Uses.—Henry Biroth, in the Chicago *Pharmacist*, decribes a number of uses to which rubber nipples may be put in addition to their legitimate occupation on feeding-bottle tubes.

1. With a piece of glass tubing, drawn to nearly a point at the further end, you can make a *pipette* or *medicine-dropper.*

2. They will answer excellently as *suppository-moulds.* Hang them in the top of a tin seidlitz-box through which holes have been punched, dust the inside of the nipples with lycopodium, and disregard the perforation at the top.

3. Slip a nipple tightly over a moistened cork, and you have a *rubber stopper.*

4. *Funnels* and *safety-tubes* can be easily made by passing glass tubing through the nipples, flanging the tubes inside by softening the glass in a spirit-lamp, and making the rim with a pocket knife.

5. Fix over a Florence flask or test tube, and draw a piece of glass tubing through, and you have a substitute for a *perforated cork.*

Intestinal Displacement a Cause of Dyspepsia.—M. Glenard, a physician of Vichy, claims that displacement of the intestines or "enteroptoses," are a common cause of dyspepsia. He examines dyspeptic and neurotic patients by making them stand up, then going behind them he presses on the relaxed abdominal walls. If this procedure gives relief, he considers his diagnosis of enteroptosis is correct, and orders a binder, which gives great relief, unfortunately lasting only while it is worn.

Hearty Food.—"The lumbermen in the Maine forests work intensely in the cold and snows of winter and in the icy water in the spring. To endure the severe labor and cold, they must have food to yield a great deal of heat and strength. Beans and fat pork are staple articles of diet with them, and are used in very large quantities. The beans supply protein to make up for the wear and tear of muscle, and they, and more especially the pork, are very rich in energy to be used for warmth and work.

"The use of oily and fatty foods in arctic regions is explained by the great potential energy of fat, a pound of which is equal to over two pounds of protein or starch. I have been greatly surprised to see, on looking into the matter, how commonly and largely the fatter kinds of meat are used by men engaged in very hard labor. Men in training for athletic contests, as oarsmen and foot-ball teams, eat large quantities of meat. I have often queried why so much fat beef is used, and especially why mutton is often recommended in preference to beef for training diet. Both the beef and the mutton are rich in protein, which makes muscle. Mutton has the advantage of containing more fat along with the protein, and hence more potential energy. Perhaps this is another case in which experience has led to practice, the real grounds for which have later been explained by scientific research."

Simple Expedient in Strangulated Hernia.—This consists in dilatation of the constriction at the ring by passing the finger along the inguinal canal, until the constricting ring is felt. The finger is then gently insinuated into the opening, and if the opposing fibres do not yield readily, gentle pressure is made against the upper border of the ring until it gives way, when taxis will usually be successful.

Three Remedies for Alcoholism (C. W. Butler, in *Chironian*).—*Sulphuric Acid.*—Suitable in chronic alcoholism. Old topers who drink the hot and mighty liquors, brandy, whiskey, gin, etc. Apathy, irritable when things don't go to suit him. Dullness through the head. Stitches here and there in the head. Thirsty; in the morning he wants whiskey or brandy. Cannot drink water unless he adds alcoholic liquors, because it chills his stomach and he vomits it up. Tongue red, or coated whitish. Breath very offensive. Bowels constipated, with great pain in the rectum on defecating; or bowels loose; pasty or watery, offensive stools. Hemorrhoids, external, moist, sensitive, with stitching or burning pain. Nausea severe, with vomiting of food, of water, of *sour*, bitter mucus. Very sour vomiting. Sour, bitter or sweetish eructations. Hiccough. No appetite. Heavy, oppressive pain in the stomach on eating. Burning or coldness in the pit of the stomach. Weakness in the abdomen after stool. Frequent urination, with pain in the urethra on passing the last few drops. Old sinners with enlarged prostate. Tremulousness, without actual trembling, general and severe.

Gelsemium.—Moderate drinkers who have exceeded their allowance. Champagne drinkers, fine wine and liquor drinkers. Restless, even lively disposition, or penitent mood. Heavy, *dull, occipital* pain from pressure, from stimulants. Dull, confused feeling in the head. Thirst moderate. Craves stimulants, but wants fine liquors and long drinks—*e. g.*, champagnes, cocktails, or gin or whiskey fizzes. Cold water grateful. Tongue coated yellow. Breath offensive. Bowels not markedly affected. Nausea not prominent; vomiting rare. Little appetite. Indefinite pain through the abdomen from stimulants. Frequent free urination with relief of the symptoms, especially the headache. Nervousness and tremulousness, without actual trembling; may be general or confined to tingle groups of muscles; not so severe as with sulphuric acid.

Nux Vomica.—Results of excess, especially in young or moderate drinkers. Beer drinkers, whiskey drinkers. Cross, quarrelsome disposition. Dull, heavy, frontal headache by strong pressure. Confused feeling in the head. Can usually, but not always, retain water, Wants a "fixed-up" drink; don't know what exactly, and is not always able to retain it when he gets it. Stimulants do not relieve. Craves cold water, but cannot always retain it. Thick, dirty coating upon the tongue. Breath foul. Bowels constipated, with ineffectual urging. Piles internal or external, painful after stool. Constant incipient nausea. Bitter vomiting of food. Eructations. Hiccough after stimulants. No appetite. Heaviness and pain in the stomach on eating. Spasmodic strangury. Dull pain in the prostate, with urging to urinate or to defecate.

Cider Vinegar as a Local Antidote to Carbolic Acid.—Dr. Edmund Carleton states, in the *Trans. Int. Hahn. Association*, that, having accidentally dashed about two ounces of pure carbolic acid upon his hands, he applied some cider vinegar with the object merely of removing the odor, there being no antidote known. To his amazement, all the effects of the acid were removed in a few minutes. This chemical action has since been verified upon others, and Dr. Carleton asks if it would not be well to try it upon the mucous membrane, when occasion offers.

Cocoaine in Croup.—Labrie (*Am. Jour. of Phar.*, Feb., 1887) praises cocoaine as the best remedy for croup. He applies a brush dipped in a 5 per cent. solution of cocoaine to the throat for several seconds; a few drops are allowed to go down the larynx. The operation is repeated two or three times a day, and nothing but a little black coffee is administered.

The Pupil in the Diagnosis of Epilepsy.—Dr. James Strong, Superintendent of the N. O. Insane Asylum (*Cleve. Med. Gazette*), says that the *oscillating* pupil is the diagnostic sign, *par excellence*, in epilepsy.

"Attentive examination of the pupils of an epileptic after seizures of *petit mal*, or *grand mal*, discloses an alternate dilation and contraction of the iris, persisting for over a minute after the patient's return to consciousness. This epileptic pupil is also conspicuous during the paroxysms of mania at those moments when the patient suddenly becomes stupefied for a few seconds, staring with eyes wide open and fixed; it again betrays the dubious forms of physical epilepsy, and, above all, furnishes even to those most inexperienced with the malady a sure means of differentiating, readily and easily, true from feigned attacks."

A New Museum of Hygiene in Berlin.—A large hygienic museum has recently been opened in Berlin. The rooms on the first floor, of which there are sixteen, contain exhibits relating to fire, building, heating, ventilation, lighting, water-supply, and road and street making. On the second floor are eighteen rooms, in which are shown objects used in civil and military nursing, clothing, baths, education, asylums, prisons, etc.

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MISCELLANY.

—An instrument which consists of a telephone attached to a battery has recently been satisfactorily used in detecting metallic substances in the tissues. A current of electricity is passed through the body near the suspected substance. A steel plate and needle form the poles of the battery. A sound is heard in the telephone the moment the needle is carried over the foreign body.

—Enuresis is frequently associated with nasal obstruction.

—Ackland reports a case of slight ectropion which recovered after the extraction of an eye-tooth.

—Davaine has ascertained that seven milligrammes of iodine suffice to destroy the bacteria of anthrax in a litre of liquid. Instead of a hot iron, tincture of iodine might, therefore, be used to cauterize the bites of poisonous flies, carbuncles, and the pustule of anthrax.

—The distinction which Dr. Norman W. Kingsley would make between a trade and a profession is that, while the latter may employ the identical methods of the former, the judgment and the inventive faculties of the practitioner must be in active exercise to apply those principles and those methods to constantly varying conditions.

—A German physician in Japan, says that the Japanese women do not have as pendulous abdomens after confinement as the foreign women there. The reason is that at quickening the Jap. is girt with a supple, compact bandage which fits snugly, and can be loosened as pregnancy advances.

—Icthyol probably owes much of its success in chronic skin diseases to sulphur, of which it contains at least ten per cent.

—For the melancholy which sometimes occurs after childbirth, cimicifuga is a specific.

—A writer in the *New York Medical Monthly*, reports an operation of circumcision in a patient over ninety years of age, suffering from the effects of an elongated prepuce, which, as the author says, should have been removed just ninety years and ten days before it actually was. The somewhat belated operation was performed successfully without ether, cocaine being injected into the preputial fold, and the aged patient beguiled the time for his surgeon by telling stories throughout the operation. The healing was rapid, and the gentleman is now provided with a serviceable organ.

—Cocaine, in doses of gr. ¼ ter die, succeeded in controlling the vomiting of carcinoma of stomach, after all other means had failed, in a case shown the class at Pennsylvania Hospital by Dr. Meigs.

—In Prague, since Obstein has forbidden the washing of the mouths of infants born under his care stomatitis has almost disappeared from the lying-in hospital, whereas, previously fifty-two per cent. of the infants born there, and under ten days old were afflicted.

—The income of the Johns Hopkins University for the year ending August 31, 1886, was 225,922.38 dollars. The total expenses for the year were $185,020.96, leaving a balance of $40,901.42. The property of the university is worth to-day about 5,000,000 dollars.

—According to the official report of The Medical Officer of Health for Chelsea, London, the sewermen of the parish show marvellous health and vitality, notwithstanding they spend seven hours daily in the sewers, dealing with offensive and dangerous matter. One of the workmen, who is now pensioned off, is eighty-six years old, and was a sewerman for more than twenty-eight years. Another, who is yet at work, is seventy-four, and has been a sewerman over thirty years. Another is seventy-five, and has been a sewerman thirty-eight years. Another is fifty-five and has been thirty-six years at the work, and has never had a day's illness nor consulted a doctor during that time. The three other sewermen, though of younger years, enjoy equally good health.

—The State of New York has appropriated $300,000 for a State Asylum for Insane Criminals. The location has not as yet been selected.

—Dr. Morell Mackenzie states that the tumor in the throat of the Crown Prince of Germany is of a dense, doughy character, not cavernous, and entirely amenable to treatment. Prof. Virchen, the great German Pathologist, cannot find, after the most careful examinatien of the tumor with the microscope any morbid products in the submucous tissue.

—Dr. Knight, of Dublin, says he has administered to a patient 131 grains of quinine in twenty-four hours, but does not tell what was the result.

—Statistics show a marked decrease in the annual mortality of phthisis, the gain being in England in males fourteen per cent., and in females twenty-two per cent.; in Massachusetts there has been a gain of fifty-four lives per one hundred thousand. Thirty per cent. of the cases have an hereditary predisposition to the disease.

—Dr. Schweninger, who was successful in reducing the obesity of Bismarck, is to try his hand on the Czar. He is to receive six thousand dollars if successful, and twenty-five hundred and traveling expenses if unsuccessful.

—Dr. Strong, chief of staff, W. I. Hospital, reports 588 patients under treatment during the month of June. Mortality, 2.38 per cent. 2053 patients have been under treatment since January 1, 1887.

—Dr. E. L. Mann, late of the House Staff of the W. I. Hospital, has located at St. Paul, Minn.

—Seventy-five per cent. of the inmates of the N. Y. City insane asylums are of foreign birth.

—M. Debove corroborates the assertion made by German writers, that in cancer of the stomach hydrochloric acid is always absent, and proposes to make this a pathognomonic sign of malignant disease of the stomach, in as much as the acid is always present in every other form of indigestion. He suggests that the liquid shall be obtained from the stomach by means of an œsophageal tube, and tested for Hcl. Among other tests he mentions the German one of a solution of gentian violet, 1 to 5,000, which gives a blue color with Hcl.

—Lactated Food is bearing out our prognostication that it would prove one of our sheet-anchors in the dietary.

—The following remedy for stye, a troublesome little ailment, is recommended by M. Abadie: Dissolve 10 parts of boracic acid in 300 parts of distilled water; with a wetted piece of wadding drop some of this solution on the stye several times a day. It is said not only to effect a cure, but to prevent a return of the annoyance.